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# THE JOURNAL OF POLITICAL ECONOMY

*62*

Volume VIII  
1899-1900





THE JOURNAL  
OF  
POLITICAL ECONOMY

VOLUME VIII

1899-1900



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# THE JOURNAL OF POLITICAL ECONOMY

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*DECEMBER*—1899

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## THE CHICAGO TRUST CONFERENCE.

THE Chicago Trust Conference of September 13-16 met in response to a call issued by the Civic Federation. This is an organization designed originally to correct abuses in local politics. Its success in securing the enactment of the civil service act, in establishing the Municipal Voters' League, and in other enterprises connected with the welfare of the city led it to try its powers in dealing with questions of national rather than local significance. Four national conferences have been held under its auspices. The first in 1894, at Chicago, dealt with industrial arbitration; the second in January 1898, at New York City, with primary election reforms; the third in August 1898, at Saratoga, with the foreign policy of the United States; and the latest, just held at Chicago, considered the trust problem in its political, economic and social aspects.

Being thus called by a local political organization, it was questioned whether the conference was not inspired by some partisan motive. By some it was construed as an attempt on the part of shrewd politicians to get the trust out of national politics so that the campaign of next year might be fought on other

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lines; others thought it was rather an attempt to sound public sentiment, so as to enable party managers to shape their platforms accordingly. Whatever the motive may have been, it at least did not prevent free discussion, and while individual politicians did not forget their calling when they entered the assembly hall, partisan politics were disbarred, and the managers endeavored to limit the debate to the consideration of the economic problem now so prominently before the public.

To secure an expression of sentiment from all parts of the country the Federation asked the governor of each state and territory to appoint seven delegates. In addition to this quasi-public representation, members of congress, governors, attorneys-general, and various private individuals supposedly interested in the subject, were invited directly by the Federation, while national associations of workingmen and other organizations, such as manufacturers' associations, boards of trade, reform clubs, and universities, were asked to send delegates.

The delegates appointed by the governors constituted about one half of the membership. In some cases—as Texas—they came as a solid body, instructed to maintain the views of the dominant political faction, and confessedly not open to conviction by any argument which the debate might unfold. In other cases the appointments were made with more impartiality, Governor Roosevelt, for instance, choosing not only politicians of each party, but also a labor leader, a merchant, and scholars from the two great universities of the state.

The four hundred delegates who responded to the call were varied enough to satisfy the demand for diversity of sentiment. Coming from thirty states, all sections and almost every class of society were represented. Capitalists, manufacturers, unskilled laborers, trade unionists, grangers, lawyers, professional reformers, skilled mechanics, labor commissioners, single taxers, economists, commercial travelers, and anarchists, all were officially represented through some organization, while the gubernatorial appointees showed every shade of political belief—an assembly whose diversity gave promise of many-sided discussion and

proof of widespread interest in the subject. The trusts themselves were, however, not directly represented. Several corporation lawyers and some others whose interests were allied to trusts were there, but the officers and managers did not appear, although a few had been appointed or invited. This was the only defect in representation.

The call for the conference having been general in terms, no one could predict the character of the assembly. Though the professed purpose was impartial discussion, it was by many styled the "anti-trust" conference, while others thought its leaders would attempt to force an endorsement, rather than a criticism, of consolidation. The press had alternately ridiculed the enterprise and made vague insinuations as to the motives of its promoters. The extreme opponents of the trust were especially suspicious of some sinister design. They feared lest the trusts would again indulge their penchant for buying up everything in sight, and that the conference would itself prove to be the latest purchase of some syndicate. Semi-secret cabals were held to plan against being overwhelmed by a packed house. On the opening days this mutual suspicion was curiously manifest, and it was difficult to arrange for the necessary committee on organization and program. Each scheme for representation on this committee was opposed by some clique which dreaded the dominance of some other faction. How votes should be cast, how many should be on the committee, by whom they should be appointed, were all wrangled over until the compromise of Mr. Cockran was adopted. This provided that each national organization should choose one member of the committee, and that each state should have one representative, to be selected by a joint vote of the delegates from all local organizations within the state, and of the delegates appointed by the governor. Another dispute arose as to the treatment of resolutions, and again it needed Mr. Cockran's influence to check a wrangle which threatened to be interminable. A similar committee was appointed, to which all resolutions were referred and from which none ever emerged.



While the control of the conference was thus vested in its own committee, the program adopted was practically what had been prearranged by the Civic Federation, whose wise selection of speakers deserves much praise. While the dangers of heated partisan discussion were avoided, nearly every shade of belief was given a liberal hearing. As was inevitable in a body composed largely of politicians, much time was wasted in mere buncombe and rhetoric, which contributed neither facts nor argument to the discussion. The shifty finesse of the demagogue attempting to be all things to all men, and the turgid eloquence of the professional orator, with his stock of patriotic properties, were, of course, not lacking, but many of the fifty addresses were able and deserve careful study; some of them merely as showing the viewpoint of various classes, others because of scientific treatment of the subject discussed.

Professor John B. Clark presented the ablest economic discussion, captivating the audience alike by his impartiality and his scholarship. A more extreme wing was represented by George Gunton who delivered a panegyric on centralization, seeming to ignore any possibility of abuses. He showed boldness in presenting views distasteful to many of his auditors, dogmatism in his statements, and eloquence unusual in economic discussion. Striking, too, were the speeches of B. R. Tucker, the anarchist, and T. J. Morgan, a socialist of local reputation, both of whom defended industrial consolidation. Even Chicago prejudice against the term anarchy did not prevent appreciation of the rugged logic which carried the principles of industrial freedom to its extreme limit; in contrast the socialist, with more of the demagogue and less of the philosopher, pushed the claims made for the trust to the logical outcome of a socialist régime where all industry would be operated by one all-embracing public trust.

The radical anti-trust views were best represented by Dudley Wooten, of Texas. Despite the crudity of his views, his speech was enthusiastically received, his "breezy rhetoric," as it was termed by Mr. Cockran, being accepted in place of weightier qualities.

The interest of the conference centered, however, in the addresses of Mr. Bryan and Mr. Cockran. To these alone was given the privilege of unlimited time. The prominence of the men, the possible political significance of their utterances, the expectation of personal tilting, and the reputation for oratory held by each, all gave added importance to their addresses. Mr. Cockran's speech easily outranked all others as an exhibition of oratorical powers. Appearing as a supporter of trusts, he made unexpected concessions to the other side, some of which might, perhaps, logically damage his main position. His address was an advocate's plea, grounded on economic principles, couched in an orator's rhetoric, and tinged, possibly, with a politician's craft. Mr. Bryan made a less striking speech, distinctly inferior to Mr. Cockran's in economic reasoning, and not equal in eloquence to his own best efforts. With much direct appeal to the prejudices of his hearers, he yet was more moderate in his program than many had anticipated. It was, on the whole, a strong, thoughtful plea, but inconsistent in detail, and clearly the expression of an adroit politician rather than a philosopher.

On every point of theory divergence of opinion was to be expected from such a body with different interests and varying degrees of candor. It is impossible even to summarize all these conflicting doctrines, but it may be profitable to consider some of the views more frequently expressed in regard to the chief topics: the nature and origin of trusts, the merits or demerits of the system, the remedy for evils, the interrelation of competition and monopoly, and the attitude of labor towards trusts.

1. *The nature and origin of trusts.*—At the start one is troubled by the absence of any clear definition of the fundamental concept. The printed reports show only one definition of trusts, that of Professor Clark: "Any combination so big as to be menacing." Other speakers did not always have this definition in mind; indeed, in many cases, had no clear concept, but discussed the growing tendency towards consolidation without stopping to consider how large the business must be or what other attributes it needed to be dubbed a trust.

The weight of evidence, however, supported the view that the modern system of large business establishments was the outgrowth of natural industrial evolution. This was necessarily the view of those who advocated trust methods, but it was also advanced by all save one of the professional economists, by the leading labor representatives, and even by some who were avowed anti-trust men. Professor H. C. Adams, the unique dissident among economists, distinguished between industries like railroads, which would naturally consolidate, and many manufacturing industries, whose recent trusting was caused by abnormal economic or juridical conditions. With him, though less reserved in their statements, were all the more radical wing, who held that trusts were ever the evil product of unnatural conditions. In specifying these conditions many items were mentioned. The most common were the tariff and railroad discrimination. It must, however, be borne in mind that "trust" was used in very different senses by different speakers, and that one who described the trust as originating in some specific condition may not have meant the same thing that the economist attributed to natural evolution.

2. *Is the trust harmful?*—Here again we find a confusion of tongues even greater than the discrepancy of opinions. No one can tell whether a trust is beneficial or not unless he knows what a trust is. No two men can agree as to its merits and defects save as they agree in its definition. Under this one question, then, several are properly included. The fundamental one is whether production on a large scale is of itself advantageous. This may be considered aside from the question of probable coercion of labor, of extortion toward consumers, of corruption of politics. It involves two distinct questions: (1) whether consolidation cheapens production, and (2) whether the accompanying transformation of self-directing artisans, shopkeepers, and petty manufacturers, into employees of a great concern, works ill to society. In this form the question needs to be answered by socialists as well as by individualists. In general there was agreement in answering affirmatively as to cheapened

production, although here again Professor Adams varied the monotony—at least to the extent of intimating that there was a limit to profitable consolidation. Whether this limit was an organization larger or smaller than the modern trust, Professor Adams unfortunately did not state. Whether consolidation in itself degraded mankind was a more mooted question. Some evaded it; some—as Mr. Cockran and Mr. Gunton—boldly declared that large production necessarily and inevitably meant a higher type of man, a fuller degree of liberty; the socialists gave an ambiguous answer, declaring that the laborer was neither harmed by consolidation in itself, nor necessarily benefited by the resulting increase in product; while the popular orator, the small proprietor, the commercial traveler all agreed in declaring that the injury done by turning a man into a cog-wheel far and away outweighed all possible gains from increased production.

Granting that the industrial gain from consolidation outweighs the sacrifice of individuality, the evaluation of trusts involves a second question: Can private ownership be safely trusted with the power which comes from the control of a vast industry? As publicists admit the greater efficiency of a benevolent despotism, yet oppose the granting of absolutism to any individual, so economists may admit the advantages of production on a large scale, yet fear the effect of industrial absolutism. The centering of industry in a few hands may mean only greater power to grind the laborer and to rob the consumer. It is of little avail that production is larger, if the increased gain goes only to swell the capitalist's luxuries. Here, too, diversity of opinion was heard. One held that the industrial advantage was not vitiated by private ownership and control, for "even the capitalist, who from the most sordid motives seeks to raise the rate of interest from 5 per cent. to 6 per cent., must serve his fellows in doing it." This view, which was upheld by Professor Clark and Mr. Cockran, was directly opposed by western radicals, by socialists, by Mr. Bryan and others. These argued that the possession of such great industrial power meant also the possession of political power, which would result in the corruption of

legislatures and the overthrow of democracy. The political objections thus urged were not met frankly by the extreme pro-trust speakers.

One question remains. Granting that consolidation is economically beneficial, and that the force of competition tends to distribute the benefits even against the selfish desires of capitalists; granting that the legitimate use of consolidation is advantageous, are not the abuses and perversions of trusts so common as to require rigid control? Even their defenders admitted some such evils, while their opponents adduced a long catalogue, which it is not necessary to repeat in full. The subjects of most frequent complaint were the watering of stock, the displacement of labor, extortion—especially when aided by the tariff or by railroad discrimination—and corruption.

A significant point in this discussion is that the gist of each speaker's accusation was the injury inflicted by the trust on the peculiar interests of his own class. Those whose interests were allied to capital complained of the financial mismanagement so often found in large corporations; the commercial traveler thought trusts evil because 35,000 of his class were thrown out of employment; the retailer, because he could no longer compete; the agriculturalist, because the price of raw products was low; the consumer of trust goods, because prices were high; the displaced artisan, because new processes were introduced; and the patent lawyer, because invention was discouraged. If it is true that each class is thus injured by the trust, even the Texan vituperation seems not altogether inappropriate. Such a general enemy of mankind may well be called robber, monster, or octopus.

The diversity of accusations, however, raises a suspicion as to their validity. This suspicion is increased on recalling the American proclivity for finding some convenient scape-goat on which any and all evils may be laid. A bank charter, a coinage act, a change in the tariff have in turn been used to explain serious industrial ills, although it was impossible that such far-reaching results should flow from a single source. This tendency

may be fostered by politicians who hope to unite the unfortunate and disaffected by proclaiming a crusade against a popular bugaboo. The trust—so striking a feature in modern industry—is well suited to serve as the object of such an attack.

Many of the evils charged against trusts are not peculiar to trust organization. Abuses which are common to other forms of enterprise are brought into prominence because of their connection with trust operations. The large scale on which modern business is conducted acts as a magnifier, and popular clamor is excited against trusts because evils are there disclosed which elsewhere exist unseen.

This may be made clear by a hypothetical illustration. It is conceivable that in the case of some commodity ill-suited to American resources a tariff might keep prices above the European level without giving abnormal profits to competing American manufacturers. The high price paid by consumers would merely repay the high cost of production under the wasteful system of small establishments. If a trust should combine these warring factories, and introduce improved methods, the cost would be lowered, but not necessarily the price, since foreign competition—a force which would otherwise compel the monopoly to lower prices—would be barred out by the tariff. In such a case the high profits would be made the basis of an attack on the trust. But the real evil, namely, that consumers are forced to pay a higher price for American goods than the foreign article would bring, existed equally under the old system. Clearly the trust did not cause the evil; it merely profited by it. In a similar way the watering of stock is not an evil peculiar to large corporations. It is only one manifestation of the tendency to swindle gullible investors. To condemn trusts as the cause of this phenomenon would resemble holding the legal-tender law responsible for every "green-goods" swindle. Again, granting that the displacement of labor is an evil, it would be an evil independent of trusts, one that would recur with each new invention, with each improvement introduced by the individual manufacturer. And, finally, corruption, emphasized—perhaps facili-

tated—by the concentration of capital, was surely not unknown in the days of private enterprise.

3. *The remedies suggested.*—The admission that the accusations are exaggerated, and that trusts suffer vicariously for common misdeeds does not at all deny the validity of some of the complaints nor the seriousness of some of the abuses. The practical question then is: What can be done to remedy these evils? The answer to this depends on the position one takes on the question suggested in a preceding paragraph. To one who believes that consolidation is in itself evil, the only remedy is to strike at once at large enterprises; to one dreading the vesting of great power in private hands, the remedy is either more individualistic industry or else more thorough socialism; to one finding the cause in some external condition various specific reforms are desirable.

The simplest program was to destroy or prevent all large aggregations of capital. Some of the methods suggested for carrying out this program were: to prohibit outright corporations with more than a given limited capital; to make each stockholder liable without limitation for all the corporation debts, and thus hinder the consolidation of small capitals; to tax the income, stock, or franchise of corporations, and thus check their growth by limiting their profits.

The criticism of these plans is obvious. Many who cried for extermination failed to state how it could be accomplished. To make stockholders liable without limitation would strike a blow at the chief merit of corporations, and harm society rather than the capitalist. Even Mr. Bryan's more systematic plan lacks definiteness. Regulation by both state and Federal government is an imposing demand, but purely formal. The detail that no licenses should be given corporations exercising or attempting a monopoly is impracticable in view of Mr. Bryan's own statement that there is no real monopoly as yet, and because every business enterprise is an attempt to monopolize some trade or some market. The clearest point in the program of those who would annihilate large corporations is the declaration by

Mr. Bryan that some action is needed and any attempt to legislate reform is preferable to supine inaction. But this proposal is rather an outline for a politician's campaign than an economic policy. The economist would argue that, because a shifting policy is so disastrous, no steps should be taken unless it be shown beyond cavil that beneficial results will follow.

Slightly less drastic than such proposals were those designed to prevent misconduct by the trusts rather than to prevent consolidation. Almost every form of control was suggested, including the direct legislative determination of prices for trusted goods, and of wages for trust employees. The most popular plan, indeed almost the only proposal which met with no direct opposition, was for greater publicity of public accounts, designed to prevent stock-jobbing. Some thought this should be seconded by direct prohibition of stock watering; others, notably Mr. Cockran, thought that mere publicity would be a panacea.

Besides legislation dealing directly with the trusts, there was much emphasis placed on indirect methods of effecting the desired control. The burden of these plans was: destroy the artificial monopoly which law has erected around the trusts, and with the destruction of special privilege much of the evil of trusts will disappear; modify the patent laws so as to lessen or destroy the monopoly of invention; modify the tariff so that trusts may not lurk within its shelter; prevent railroad discrimination, and thus give every competitor equal opportunity. Such changes were widely proposed; while some thought them insufficient, none thought them objectionable.

Another class of proposals recognized that trust evils were merely symptoms of some general complaint. While this or that abuse might, perhaps, be bettered by some local application, a thorough cure could come only from a remedy which went to the root of the evil. To secure such a re-ordering of society, socialism, anarchy, public ownership, single tax, and the referendum were, each in turn, recommended as the one thing needful. Mr. Seymour's paper was one of the most suggestive on this line. Finding an identity between the corrupt practices of



corporations and of individuals, he traced them both to the low moral tone of the business world. Perfectly to solve the trust problem, he held, involved the discovery of some method of raising the moral standard of a race.

4. *The interrelation of competition and monopoly.*—The foregoing discussion has shown the importance of the theory of monopoly to the trust problem. It is true that not all the evils charged to trusts are dependent on monopoly. The dehumanizing effects of centralization would remain were there two competing combinations instead of a single one; the displacement of labor would be almost as great; political corruption might be even greater. But, in general, trusts are criticised because they are held to destroy competition. The critics use trust and monopoly as synonyms; their corrective measures are aimed at the monopolistic features. The discussions in the conference, accordingly, turned much on monopoly, yet there was no general agreement in the use of the term. When Professor Clark declared the evil of monopoly he meant something quite different from that which Mr. Bryan condemned. One speaker would describe monopoly as the antithesis, another as the perfect fruit, of competition. Behind this apparent disagreement there was, however, real unanimity. If a monopoly be defined as the power on the part of producers arbitrarily to maintain high prices, all agreed that such power could not wisely be vested in private control. Even Mr. Cockran agreed to this. There was further agreement that any form of governmental favoritism which indirectly gave this power would be as unjustifiable as would the direct enactment of a corporate monopoly. Disagreement arose as to whether, in the absence of such government favoritism, the force of competition was adequate, or whether, in addition to such negative action, government should take positive measures to secure competition. Subordinate to this was the question whether certain government regulations were of such a nature as to establish a monopoly which would not otherwise exist. Thus, while all agreed that government favoritism was unjustifiable, it might be debated whether a given tariff law really gave monopoly powers to an American trust.

As shown above there was much agreement that in order to prevent such an artificial monopoly some changes should be made in the tariff and patent laws, and railroad discrimination should be prevented. Both Professor Clark and Mr. Cockran argued that natural competition would prevent extortion. Perhaps, after all, this is the crucial point of the whole conference : whether in a free market the force of competition is adequate to prevent extortion ? The radicals generally ignored the power of latent competition. The usurpation of a market by the goods of a single concern was held by them to be tantamount to wholesale robbery of the consumer. Mr. Bryan was emphatic on this point, at the cost of being inconsistent. Even in the more extreme case of a capitalist monopolizing land in a given neighborhood, Mr. Bryan argued that competition would check his greed ; how, then, can a manufacturing combination, where there is much less friction in competition, hold undisputed sway over customers ? But Mr. Cockran may have erred on the other side. Theoretically-free competition does not exist in actual life. The abstractions of the economist are valuable in making deductions, but there is danger when an unskilled hand applies them as working models in practical politics. As the mechanic does not start his machine and trust to the physicist's abstractions of inertia and persistence of force to keep it moving, so the politician should not trust to the abstraction of free competition to keep society in its course. To say that free competition will prevent extortion would be to beg the question : Does free competition, in any proper sense, exist as between a small producer and a great trust ? Latent competition is certainly a mighty force wherewith corporate greed may be kept in check ; that it is ever-present and all-sufficient needs to be demonstrated. Professor Clark, though a professional economist, was at once more philosophical and more practical. He recognized that something more was needed to secure the benefits of competition than the mere repeal of legislative privileges. The power of the corporation itself might create privileges almost as potent as a governmental patent. The repeal of objectionable tariff measures and the cure of rail-

road discrimination are in the line of securing greater freedom of competition, but are insufficient if the action of the corporations themselves can effectually destroy rivals. Hence Professor Clark urges the need of preventing trusts from killing off competition by showing discrimination against certain rivals. Uniform prices should be required of all corporations equally with uniform rates in transportation. Perhaps the realization of such a program would be a difficult task, but the recognition of the evil is at least an advantage.

While several speakers emphasized latent competition by possible producers, only one speaker, and he the representative of a labor union, brought out the competition of substitution. Mr. Garland said :

There is not an article produced in these modern times but there are, or can be adopted, several substitutes for it ; and the cost as a rule will not vary enough to permit any greater or long lasting extremity to our needs.

The importance of this is great. Even a city gas company, which can have no direct rival, is constantly restrained by such competition. In such a case there is no chance, should prices go too high, for rival capital to come into the field and build a new plant ; that is prevented by the exclusive franchise. But the ever-present competition of oil and electricity set a very definite limit to the extortion of the gas company. Similarly, natural and artificial gas, oil, wood, soft coal (raw and coked) briquettes, even corn and twisted hay act as a bar to the extreme extortion which might otherwise be practiced by a monopoly of anthracite-coal barons. It is true this form of competition may at times be insignificant ; but to speak of trusts as being able to establish prices on their own terms is oratorical hyperbole. Linseed oil, sugar, glucose, whisky, cordage, strawboard, biscuits, cereal preparations, beer, all trusted products have substitutes whose competition can be met only by keeping down prices. It is surprising that the conference paid so little attention to this phase of competition.

5. *The relation of trusts to labor.*—The debates of the conference are more significant on this point than on any other. The

aggressions of the trust on the rights of the laborer and the lowering effect on wages make fine subjects for public harangues, and the politicians of the conference used them freely. The starving employee is an excellent bit of oratorical property not to be slighted by any stump speaker. But it is a significant fact that it was not the laborer who was the most bitter complainant. The small producer and the traveling man were the extremists. To be sure, the representative of the Knights of Labor could not well be exceeded in virulence, but the trade unionists all spoke with moderation. Mr. Gompers said that wages were continually rising, and that trusts will increase; Mr. Garland conceded that trusts may have some advantages to the workman; Mr. White, in a paper which for impartiality and clear reasoning was scarcely surpassed in the conference, claimed no friendship for the trusts, and hinted at probable abuses, but indulged in no general denunciation. Mr. Morgan, of course, took the socialistic attitude of encouraging trusts as a step towards socialism.

The more bitter foes of the trusts intimated that organized labor was not altogether disinterested in holding these conservative views. Trade unions were accused of having leagued with capital to form a more gigantic trust for the joint spoliation of the consumer; they had been bribed by high wages to become a party to a conspiracy against their fellow-workmen and against society. In support of this view it was urged that the rate of wages would be immaterial to such a combination, since a monopoly could always recoup itself by increasing the price of its products. Granting this, though the force of substitutional competition denies it, it is difficult to see why an unrestrained power to raise prices should wait on higher wages, or why additional profits are not as much sought for at the expense of labor as at that of the consumers. Whatever the price, higher wages mean, *ceteris paribus*, lower profits. The only way in which juggling with prices could affect the problem is on the assumption that the monopoly has some maximum rate of gain, beyond which it is not desirous to go. But this is an hypothesis which the critic of monopoly would hardly accept.

Another explanation of the attitude of organized labor is more reasonable. While it is true that disinterested students of social and economic problems have recognized and criticised the dangerous tendencies of modern centralization, yet it is the small manufacturer who has constituted the backbone of at least the popular attack on trusts. Others whose interests have been injured have joined in the campaign, and politicians, for one reason or another, have espoused the cause. But it is the small producer, whose business has been destroyed by fair means or foul, who supplies the virulence of the attack. The general public has been asked to come to the support of the small proprietor, whom the octopus threatens to swallow. Now, in this conflict the laborer is not primarily interested. Complaints enough he has against the employing class, but he sees that the small proprietor, equally with the trust, is an employer of labor; and he does not see that it is incumbent on him to fight one employer for the benefit of another. Recognizing that the centralization of industry gives a few men dangerous power which may be used to oppress the laborer, he also sees that the power may result in immensely better conditions for labor. The sufferings under the régime of small proprietorship by no means lead labor to champion the old as against the new system, which at least offers hope of some benefit through higher wages and lower prices. Being thus neutral in the fight between the small proprietor and the trust, the labor-leader sees both the merits and the dangers of consolidated industry. In the Chicago conference the labor-leaders ranked next to the professional economists in the disinterestedness of their position.

Both enemies and friends of the trust made strenuous efforts to secure the active support of the labor class. On one side a picture was shown of the oppression of the wage-earner which would follow when the trusts gained absolute power; and rhetorical appeals were made to the laborer's prejudices against the employing class. One who would make a popular appeal in favor of trusts has a more difficult rôle. It is hard to awaken sympathy or excite enthusiasm for the wealthy capitalist. To

offset this handicap seemed to be part of the policy of Mr. Cockran. His extreme courtesy to the labor representatives, as shown by two motions to grant them unusual privileges on the floor, his compliments to their wisdom and economic learning, his eloquent eulogy of labor, the consultations reported to have been held with the labor delegates, and their expressed hope "that he might be able to do something" for them—all these would seem to indicate that behind the economic discussion, the fervor, and the eloquence there was an undercurrent of shrewd political policy. If this political foresight was apparent in the case of Mr. Cockran, it without doubt was present with many another. Politics could not be entirely kept out, even by the diligence of the management, and to some extent the conference was less valuable because of this element of finesse.

Perhaps one of the most gratifying features of the conference was the deference paid to acknowledged economic principles and the respect accorded to professional economists. Since the days when Webster vented his scorn of all economists "from Adam Smith to Professor Dew" it has been customary for politicians to treat them, at least, with complacent disdain. The economist has not been looked up to with any marked respect, as the laws of the last forty years witness. Little of this spirit appeared in the conference. In one instance a western politician declared that the academic element never was friendly to practical freedom. The only other instance (save some remarks made in an irrelevant discussion of the tariff) came, strangely enough, from one who is himself an eminent economist, and was an insinuation of professional venality. The conference, composed largely of practical politicians, listened to the seven economists on the program with more than average attention, and press and public alike recognized that the impractical theorist had a message of real import. It was evident to many that neither the scheming politician, nor the unbalanced enthusiast, nor the unfortunate victim of industrial changes was the best judge of conditions, nor the wisest guide for legislation. The calm, measured, disinterested

propositions of the professional economist appeared all the better for the background. No speaker created a better impression on the public than did Professor Clark.

Nor was the courtesy shown economists the only gratifying sign. Despite much wild talking there was evidence that many of the speakers had made careful study of the underlying principles. That any politician, speaking on a subject of so many emotional phases, could appeal to economic reasoning rather than to passion is encouraging. Mr. Cockran's speech is a good example of this. His skill as a politician, his power as an orator are well known, yet he did not merely appeal to prejudices, nor rely solely on the spell of his eloquence. Without agreeing to all his propositions, one must admit that his argument was based on economic principles, and that it could have been made only by one who was a student as well as a brilliant orator. The leavening of the body politic with economic doctrine at times seems hopeless. The members of the academic circle are too often unfitted by their training and disposition to make popular appeals, and they are often disheartened by having their logic put to rout in the arena by the clever sophisms of some master speaker. To find an orator such as Mr. Cockran dealing in economic wares is a more hopeful sign than even the fact that a dozen economists sat in a public convention. It perhaps presages a closer union of politics and economics, a bridging of the chasm which has separated the academy from the forum.

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## TRUSTS FROM AN ECONOMIC STANDPOINT.

THE problems involved in the modern process of industrial centralization are so numerous and in some cases so far from economic in their nature that, when treating the subject from the standpoint of economics alone, it is necessary to get rid of some of the attendant complications. For instance, the argument against trusts based upon the allegation that the managers of such immense corporations exercise a dangerous political influence is entirely without the scope of an economic investigation. The treatment of that argument must be left to the political scientist. Similarly, the question whether or not the course of events threatens a new and alarming kind of political serfdom for the masses is not a question for the economist. Again it is the political scientist who must answer. These phases of the subject do not come within that part of the territory of economics which is overlapped by the domain of political science. They belong exclusively to the latter. All that the economist is concerned with is the question, "Does the centralization of industry tend to augment or to reduce the compensation of the members of the society?" When this question is correctly answered, economic science will have performed its duty.

By stripping the subject of the complications mentioned and considering it exclusively in its economic aspects, we are enabled to focus our attention upon a definite problem and to apply to its solution in a scientific manner the economic principles which have already been settled. We are moreover enabled to free ourselves to some extent from that indefinable feeling of suspicion and alarm with which we naturally view this novel feature of modern civilization, a feeling prompted not so much by reason as by the inborn dread of venturing into the unknown. How real this feeling is, and yet how formless, the experience of everyday life shows. In fact, we are standing upon the threshold of



a political campaign which promises to have for one of its distinctive features a hysterical attack upon trusts, an attack which the party responsible for it attempts to justify, not by the invocation of well-defined principles of government, but by an appeal to that feeling of vague distrust which is so prevalent throughout the country. And, strange as it may seem, nearly every economist contents himself with gravely wagging his head and uttering pessimistic prophecies whenever the topic of trusts is broached, making little or no attempt to treat scientifically the problems involved. Yet this is the peculiar field of economic science. If its principles cannot be utilized in the solution of problems of this nature, what are they but barren speculations? But, so far as the writer has observed, economists have hitherto treated this subject from a general as distinguished from a technical standpoint. Their arguments have been such as any thoughtful man would advance, even though he had never seen a work upon economic science. Therefore, it has naturally come to pass that vagueness is the chief characteristic of the discussion; the issues have not been clearly drawn, and an enormous mass of irrelevant and vituperative matter has been injected. By reducing the problem to the simple question, "Does the centralization of industry tend to augment or to reduce the compensation of the members of the society?" we at once frame a definite issue in the solution of which well-settled economic principles can be utilized. Let us see then whether economic science will not aid us in this intricate and important investigation, whether it will not furnish us with the thread by which we can retrace our steps through the jungle of popular prejudice and passion to the open ground of scientific knowledge.

In seeking for the correct answer to the question which we are considering, it is necessary, in order to avoid confusion, to consider first the economic effect of industrial centralization free from any feature of extortion due to monopoly; and, secondly, to consider the problem when complicated by the presence of that feature. The economic principles involved in these two conditions are vitally different. In the first case, it is assumed that

the operation of the law that prices fall toward the cost of production and therefore that commodities exchange in the ratio of their respective costs of production, is not interrupted; hence the problem involved relates to the distribution of the total product among the members of the producing society. In the second case, an interruption of the course of prices toward the cost of production is assumed; hence the problem involved relates to the power of a trust to check this movement.

Let us take up the consideration of these problems in the order stated.

It is now a familiar and well-settled principle of economic science that in every producing society there is a movement toward an organization in which every unit of labor<sup>1</sup> receives as compensation an amount equivalent to its product. That this movement is the logical result of conditions can be shown by a simple example. If we say, for instance, that the occupations of carpentry and bricklaying require precisely the same grade of labor and involve the same sacrifices in every way, but that the pay of the bricklayer averages only \$2.50 per day while the pay of the carpenter averages \$3.00 per day, it can readily be seen that there will be a flow of labor from the occupation of bricklaying into the occupation of carpentry and that this movement will continue until the compensation in the two occupations is equal. Extending this example to cover all occupations in which labor is of the same grade, it will be seen that there is a constant movement toward uniformity in the compensation of the labor employed.

Similarly there is an equilibrium between high grade and low grade labor. If we say, for instance, that a force of 50 carpenters requires 5 foremen of an efficiency equal to 10 to turn out product of a quality and amount equivalent to 100, and say further that there are 5 other foremen in the market under whose management the product will be equivalent to 95, it is obvious

<sup>1</sup>The word "labor," as used in this article, refers to the work of every man — laborer, mechanic, capitalist, and everyone else who renders any service for which society pays. Therefore, the term "compensation of labor" includes wages of superintendence, etc.

that the difference between the compensation paid to the 5 higher grade men and that paid to the 5 men next in efficiency will not exceed the difference between the amount of product turned out by the respective grades of labor, and that whenever this proportion is exceeded, the equilibrium will eventually be restored by an automatic readjustment of conditions. This example covers all wages of superintendence.

Combining the two instances mentioned above, it will be seen that there is a constant movement in every society toward a condition of equilibrium in which the compensation of every man, whatever his occupation, will be regulated by the amount of his product.

Before proceeding with the argument on this basis, however, it is necessary to diverge for a moment to meet an objection that will certainly be raised to the conclusion just reached. It has been said many times that the experience of everyday life disproves this conclusion. One example that has been adduced is that the office of Chief Justice of the Supreme Court of the United States, although far less lucrative than the independent practice of many lawyers whose services to society are of comparatively inconsiderable value, is yet eagerly sought by lawyers at great pecuniary sacrifice. "How, then," it is asked, "can you ignore the obvious fact that other elements than the monetary consideration help to fix the rate of compensation?" The only answer that can be made to this question is to say that it is not intended that this fact shall be left unconsidered. It is, however, evident that if we attempt to include such elements in the fund from which compensation must proceed, we shall have to go far beyond the idea of a distributive share of the total product of the society and take into consideration many motives and phases of character which are not purely economic in their nature. For the purposes of economic reasoning, it is necessary to have a fund that is divisible into tangible units, and this is the case with the total product of the society. No method has yet been devised for expressing such indirect compensation as fame, high position and the universal estimation of mankind in

such a way that it can be divided into units of compensation as can be done with material commodities. We must, therefore, be content for the present to deal only with that part of the compensation of labor which can be seen and touched. By this qualification, the conclusion that there is a constant movement in every society toward a condition of equilibrium in which the compensation of every man will be regulated by the amount of his product is brought into conformity with the teachings of experience.

Thus far the argument has not taken into consideration the other great factor in production—capital; it has dealt only with a state in which labor is the sole producing agent. How far is it necessary to qualify or amplify the above conclusion to make it applicable to the present complicated structure of society in which capital is so extensively employed?

In a note published in this *JOURNAL* for September 1899, I have endeavored to show that in the static state the portion of the price of a commodity going to capital as compensation is the sum total of the compensation of the labor employed in making and utilizing the capital, interest being expressed in terms of labor. Let us reduce this abstract statement to the concrete and apply it to society as it exists. Say that there is a producing society, one half of whose members are employed in making machinery and other forms of capital and the other half in producing with the aid of such capital commodities for consumption. Assuming that all of the machinery is used up in production, the whole of the commodities produced will be the fund which will be distributed proportionately to every member of the society as compensation for his services, whether he was employed directly, as in the production of the commodities, or indirectly, as in the production of the necessary machinery. It is evident that if, in the manufacture of certain commodities for consumption, 100 days' labor is required, working with the aid of machinery in the construction of which 100 days labor has been expended, and if the machinery is entirely used up, the amount of labor which has been employed

in the production of the finished commodities and which must be compensated is 200 days. Hence, in forming a system by which the total product of a producing society will be distributed, all of the labor employed in production can be gathered into one mass. It is not necessary to make any distinction between the labor employed in the manufacture of commodities for consumption and the labor employed in the manufacture and utilization of the necessary capital. The flow of labor from one occupation to another which naturally follows any disturbance of the equilibrium forces the compensation of the labor employed in manufacturing machinery and other forms of capital toward an equilibrium with the labor employed in producing commodities, the capitalist and the entrepreneur being included in both cases.

Up to the preceding paragraph, the argument has proceeded along lines sanctioned by the preponderance of economic authority. When, however, I assert that the compensation of the capitalist, usually termed "interest," is in equilibrium with the compensation of other men, I advance a proposition which must stand to a great extent upon its own foundations. The idea that the capitalist and the ordinary worker are separated by a Chinese wall is of such hoary respectability and is defended by such a formidable phalanx of intellect that I should hesitate to advance the proposition just mentioned if I were not convinced that it is not only a plausible but a necessary consequence of the theory that the compensation of every unit of labor tends toward an amount equivalent to its product. I cannot rid myself of the thought that the productive force which called into being all the vast accumulation of wealth which exists is resolvable into units of labor. Is not that great structure the work of men? True, a great deal of the labor power was exerted indirectly in the manufacture of machinery and other forms of capital, but the ultimate end was never out of sight. If a man work one day to make a tool and work the next day with that tool to make a second tool, and work a third day with the aid of the second tool to produce a consumable commodity, the commodity is the result of three days' labor, it being premised, of course, that the tools are used

up in production. Now, if this finished product were to exchange for a greater amount than three days' labor of a man who did not have to use any extra foresight, energy or abstinence plus an amount representing the compensation of the extra foresight, energy or abstinence of the man who anticipated the need and produced in the expectation of filling it, then labor would flow in and restore the equilibrium. And this little example can be extended to cover the case of society as it is. The intercourse of millions of people has resulted in an almost incalculable complication, but no new element has been introduced. The total product of the producing society is still the result of the work of the men employed and is distributed proportionately to their contributions.

But even though the reduction of interest to terms of labor be so obviously in accord with reason, the author of this article would have preferred to make use of accepted principles if those principles had been such as to permit of an adequate treatment of the subject. In the course of his reading, however, he has not been fortunate enough to meet with a theory of imputation which seems to meet the requirements. The essence of the attack upon trusts is that the capitalist is benefited at the expense of the workingman. Therefore, it is absolutely imperative that we should be able to show, if such be in reality the fact, that economies in cost of production resulting from savings in both labor and capital redound to the benefit of both; and this fact cannot be shown until the point is found at which the compensation of labor and capital will be in equilibrium.

As intimated in the note published in the September number of this JOURNAL, it may be claimed that the reduction of interest to terms of labor based upon an analysis of the cost of producing and lending capital conflicts with the theory that the compensation of capital is governed by its marginal productivity. Professor Carver has, however, shown that the marginal productivity of capital falls toward the point of marginal cost, and in the condition of equilibrium coincides with it. In the above argument this movement is deemed completed. The claim that

until the compensation of capital reaches the point of equilibrium its marginal productivity will be a more accurate measure than its cost is not controverted.

If the above principles be accepted as correct and the massing of all labor in one great harmonious system be permitted, the theoretical effect of industrial centralization can be easily ascertained. Inasmuch as it results in the release of labor and capital, and as the labor and capital released will either seek employment in new fields or will expand the old, thus increasing the total product, the distributive share of each unit of labor, whether employed in producing commodities for consumption, or in producing and lending capital, will be increased because the total product will be increased while the number of units of labor among which it is to be distributed remains the same.

Speaking generally, then, the centralization of industry results in a greater total production; and, owing to the fact that the unceasing competition between man and man for a share of the total product causes ultimately the formation of definite proportions between the various individual members as well as between the various groups, the increased total product will eventually be distributed in approximately the same proportions as the smaller amount previously produced.

When the problem of trusts is regarded from the above standpoint, it will be seen that the economic principles involved are exactly the same as those presented by the introduction and use of machinery. The result of the above reasoning is, therefore, corroborated by the experience of mankind. It is not denied by economists that the comfort of all classes today is vastly greater than it was 100 years ago. It is true that there are many who claim that the rich grow richer and the poor poorer day by day; but this statement is based upon no scientific or historical foundation, and as a rule the motive of the allegorist is not the advancement of science. It is further the almost unanimous opinion of economists that the improvement in material conditions is attributable, directly or indirectly, to the use of machinery. Indeed, how could there have been an

increase in the distributive share of each person unless there had first been a corresponding increase in the total amount of product to be distributed? The use of machinery, which seemed at first to cause so much suffering to the laboring classes, proved, when the process of adjustment to new conditions had been completed, to be not only of benefit to those classes as well as to the rest of mankind, but also absolutely indispensable to the progress of civilization. And the principles involved in that case are involved also in the case of trusts. In each instance there are presented the phenomena of displacement of labor, temporary suffering, the flow of labor into other channels, and a consequent increase in the total product and in the distributive share of each individual. Thus, while the relative position of the various zones of productive efficiency has not been changed by the increased productivity of all classes, except in so far as the better environment has produced changes in the human organism, the whole mass of man subject to its influence has been raised to a higher level of comfort and enlightenment.

Now, if we admit that the use of machinery has been the chief, if not, indeed the only cause of the advance of civilization during the last century because of the saving in cost of production, that is to say, because of the increase in productive power which it has effectuated, we cannot but admit also that further savings in cost of production resulting from combination must have the same result. Economically considered, the term "advance in civilization" is practically synonymous with "increase in productive power." To retard the progress of society toward the most efficient organization would, therefore, be to retard the progress of civilization.

In order to trace the practical operation of the principles involved, let us compare a miniature society under the competitive system with a miniature society more compactly organized. Let us imagine that a society exists in which production in the three great branches of groceries, clothing, and building materials is carried on by thirty firms, ten to each branch, employing in the aggregate 3000 men. Say that this society has reached a



state of perfect equilibrium; that is to say, the total amount of product is exactly adapted to the needs of the people, and is distributed among them in proportion to the productivity of each.

It is now claimed that the consolidation of these thirty firms into say three great corporations will be a public injury because many who have been employed in the competitive state in soliciting trade, buying material, etc., will then be unnecessary, and will be discharged. Is not this precisely the same objection as has been urged against the use of labor-saving machinery ever since the labor riots in England in the textile industry? And, it having been so completely disproved by experience in the case of machinery, is there really need for argument to disprove it in the case of trusts? Must economists forever be called upon to explain that every man unnecessarily employed in the production of a commodity draws his pay at the expense of every other man in the community; that he is as much a burden upon the people as if a tax for his support were levied and collected by the government? Let us, however, go over again this oft-traveled ground.

Say that the thirty firms in the competitive state outlined above are consolidated into three great corporations, one for each branch of industry; and that then, because of dispensing with labor of various kinds, including traveling men, salesmen, mechanics, etc., the same amount of product can be produced by four fifths of the labor previously required. There are now 600 men thrown out of employment. Upon their fate hinges the good or evil of industrial centralization.

If we arbitrarily say that the exclusion of these men from profitable employment is permanent, then the trust is worthy of all the denunciation heaped upon it, because every consolidation would be attended either by a decrease in the population or by a lowering of the standard of living, or possibly by both. If, however, we take the obviously true view and say that the energy thus released will either flow into the production of new commodities or will improve the old, a view which is certainly

in accord with both theory and the teachings of experience, we see that, although there will be temporary suffering in the process of change from one occupation to another, yet when this process has been completed, the total amount of the product of the three thousand men will have been increased one fifth, and hence a day's labor of each man will exchange for one fifth more than it previously would. And what fair-minded economist will deny that this result is precisely what we are witnessing every day either as the result of new labor-saving inventions, or the increased use of machinery, or the centralization of industry? Certainly, the comfort of the human race has never been so great as it is now, and industrial centralization affords the hope that the increase will be still further continued.

Having disposed of the argument against trusts based upon savings in cost of production, which is merely another way of expressing increase in productive power, let us take up the feature of extortion due to monopoly.

The fear which has been expressed by many that the consolidation of industries will eventually lead to a state in which the rights of the consumer will be utterly at the mercy of the managers of the trust seems to have its origin partly in a wholesome dread of the conditions which existed in England previous to the passage of the Statute of Monopolies in 1623. Then, it will be remembered, there were but few of the great branches of trade which were not controlled by monopolies acting under a patent from the crown. The position of the consuming public was deplorable. The rapacity of the patentees knew no bounds. But not enough importance seems to be attached to the fundamental difference between such monopolies and the modern trust. The ancient monopoly was bolstered up by all the power of the crown. It threatened possible competitors not only with the dangers attending a commercial warfare with a powerful and unscrupulous foe, but also with the penalties of the law. How different is the position of the modern trust! In the first place, there is probably no instance in which it constitutes a complete monopoly or anything like it. In the second place, excessive

profits breed instant and ferocious competition. A trust is beset on all sides by strong and energetic capitalists, eagerly awaiting an opportunity to pounce upon its trade the moment conditions appear to promise a profit. Witness the present war upon the Sugar trust. Witness the downfall of Cordage. What business man would contend that it would be in the power of even the most successful trust to mulct the public at will? Would not any such attempt to force prices even to the figure at which they would necessarily be if the business were divided among many small companies, excite an opposition so strong, a feeling so bitter in the public mind, that the very corporate existence of the trust would be threatened? The picture of a great nation in thrall to a combination of capitalists and robbed of their proper compensation by extortion upon extortion is an affecting picture, but it is an absurdity. If skillfully presented to an audience and embellished by an appeal to the spirit of envy and class hatred, it may be depended upon to catch many votes among the discontented; but it should not impose upon economists. Upon whatever points political economists may differ, there is certainly one upon which they must agree, and that is, that where competition is unrestrained by law, it is not within the realm of probability that any combination can be formed which will have sufficient strength to obtain a complete monopoly in the trade in any great staple and use that monopoly to extort excessive profits from the consuming public. It is, of course, a possibility, in the sense that anything not involving a contradiction in terms is possible; but no economist who has any respect whatever for the settled principles of the science can doubt that the law that prices move toward the cost of production expresses the operation of an irresistible natural force which cannot be withstood for any considerable period in a state of commercial freedom.

There is another aspect in which the problem of centralization must be considered; that is, its relation to the struggle of the nations for commercial supremacy. In our domestic markets, we can protect our manufacturers to some extent from superior economic conditions abroad. If, however, our manufacturers

match themselves against the foreigner in the neutral markets of the world, the only possible hope of victory lies in producing at such a cost that they will not only be able to compete with foreign manufacturers under equal conditions but will be able to oust them from a field in which they have been paramount. The problem confronting us, then, if we wish to acquire a pre-eminent position in the markets of the world, is not simply to produce as cheaply as the most efficient manufacturers abroad but to produce more cheaply. Now there are but two ways in which we can obtain a decisive advantage over our competitors : the first is by using better machinery ; the second, by producing on the gigantic scale which our immense resources make possible. The first advantage is necessarily temporary ; but the second is more permanent. Our manufacturers have already discovered the advantage of manufacturing on a large scale, with the result that we are making tremendous strides towards pre-eminence as a commercial nation. Particularly is this true in the iron and steel industry. The great iron and steel companies own their own ore-beds, mine their own ore, transport it in their own vessels and over their own railroads, smelt it in their own furnaces and convert it into finished material. Owing to this intense centralization, the cost of the finished product is so small that the manufacturers are able to sell abroad at a price which defies foreign competition and to produce enormous quantities in a period of time which appears to foreigners marvelously short. If the process of centralization, the results of which we are now witnessing, had been arrested, and each of the branches mentioned above were now carried on by an independent concern, we might indeed have more men employed to each ton of finished product marketed at home, but we should not have an opportunity to employ any men whatever in manufacturing for the foreign trade. Last year, then, in iron and steel alone we should not have had employment for men producing 70 million dollars of exports. And this branch of our trade is still in its infancy. Looking forward even a few years to the result of the present process of centralization, we can surely say that the total

number of men employed in export and domestic trade will be far greater than could possibly have been employed in domestic trade alone under a decentralized industrial system, and, in addition, that the real wages of every man will be augmented owing to the greater cheapness of commodities.

Nor must it be supposed that it is entirely optional with us whether we shall avail ourselves of this means of increasing our productive power as a nation. Other nations are following the same path. If now we arrest the onward movement or impede it by harassing legislation, our competitors in the race for commercial supremacy, which means practically the position of primacy among nations, will advance at our expense.

Summing up, we can say that, from an economic standpoint, not only is there nothing to fear from trusts, but they are absolutely indispensable to the attainment of the ideal state in which men of the highest possible development produce the greatest possible amount of the most advantageous commodities. Without a most intense centralization of industry, the maximum amount of product *per capita* cannot be had; and without a great increase in the amount of *per capita* product, poverty and its companion, crime, will be forever rife among us. An ultimate state in which both of these specters will be absent is the dream of the economist. If achievable, it lies far along the path of increased production, and compact organization is indispensable to its attainment. That many men will build up enormous fortunes during the process of industrial change goes without saying, for nature ever goes to extremes with the pioneer; but when the adjusting forces of nature have completed their work, the compensation of such men will return to its normal proportion and the whole mass of man will be lifted to a plane of civilization as much higher than the present as the present is above the age preceding the alliance between man and steam.

It must not be supposed, however, that it is intended by the above argument to justify either an abuse of commercial freedom or a change so rapid as to produce suffering out of proportion to the good achieved. It is quite conceivable that, in cases

where there is a monopoly more or less complete, unwise and reckless officers of a great corporation may use their power unfairly and oppressively; and, even though the duration of the evil must necessarily be comparatively short if the cure be left to natural forces alone, still it may be advisable to invoke the interference of the state. But such cases may safely be dealt with as they arise. The possibility that they will occur does not warrant a blow at the whole process of industrial centralization. Beneficent regulation is one thing; prohibition is another and vastly different thing. The policy dictated by the economic principles outlined above would seem to be to sanction the general principle of centralization, and to deal with isolated instances of abuse as they arise.

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## THE FOREIGN TRADE OF THE UNITED STATES FROM 1820 TO 1840.

### I.

IN studying the accounts of a farmer no great time or effort is required to form a picture of the general character of the farm and the people who occupy it. One may in this way learn to what crops its soils are suited; whether it is a stock or fruit farm; what are the occupations of the farmer and of his family. The various wants of the farm population, and the means by which they are satisfied are registered in this record of sales and purchases. The analogy between such a farm and the United States in its relations to the world market is suggestive. The economic independence of this country in comparison with others is often remarked upon. Yet a detail study of its foreign trade statistics soon shows that such industry as is not dependent in some degree, upon foreign supplies, is both small and crude. A study of the causes and effects of that trade is, therefore, a review of the economic evolution of the country from a standpoint possessing some peculiar advantages. Nevertheless, frequent recourse to other sources of economic information must be made, if the results of such a study are to be helpful or conclusive.

In 1820 there were about ten million people in the United States. One fourth of this number had already found homes west of the Alleghanies, one fourth lived on the Atlantic slope south of the Potomac, a sixth in New England and a third between New England and the Potomac. The density of population in New England was one half greater than that in the central section, three times that in the South, and five times that in the West. The total area then occupied was a little over half a million square miles; the average density of population a little less than twenty to the square mile. The proportionate

area of occupied territory in each section was, approximately, in the ratio of one in New England, three in the middle section, four in the southern, and six in the western.

In New England, 172 persons out of every 1000 were engaged in agriculture, 15 in commerce and 51 in manufacture. Of every 1000 people in the middle states, 163 were occupied on the farms and only 7 in trade, or less than one half the relative number so engaged among their neighbors on the north. Fifty out of every 1000 in the middle states were at work in shops and factories, and of all those engaged in the textile and iron industries of the United States, probably one half resided in this section. The South Atlantic states enrolled 381 out of every 1000 as engaged in agriculture, 4 in commerce and 21 in manufacture. The presence of the slave is shown by the relative number of agricultural laborers exceeding that in the northern states by over one half. In the West the preponderance of agricultural labor was not quite so striking, though the slaveholding states of the Mississippi valley have been included in this section. The returns show 245 of every 1000 as occupied on the farms, 6 in commerce and 24 in the factories. Even the small number 6 gives an exaggerated idea of the importance of commerce in that part of the country. If Louisiana is excluded from this section we find that only 3 in every 1000 of its population were engaged in trade. How largely the West depended upon its navigable rivers for transportation and to what an extent its trade centered in New Orleans is shown by the fact that 41 out of every 1000 of the people of Louisiana were engaged in commerce. Measured by this standard the importance of commerce was 50 per cent. greater to Louisiana than to Massachusetts, and its importance to Massachusetts was twice as great as to any third state.<sup>1</sup>

Heavy freight wagons had, to a large extent, taken the place of the pack horses of half a century earlier, but the canal was for the most part, and the railroad altogether, a thing of the future. By pack horse in 1784 it cost \$249 to carry a ton of

<sup>1</sup> The Census of 1820.



freight from Philadelphia to Erie, and as late as 1821, so high a rate as \$11 a hundredweight was paid for freight from Philadelphia to Pittsburg.<sup>1</sup> A report to the legislature of New York, dated March 17, 1817, gives some conception of conditions prevailing before the building of the Erie Canal. "The expense of transportation from Buffalo to New York was stated at \$100 per ton . . . , the cost of transportation equaled nearly three times the market value of wheat in New York; six times the value of oats; and far exceeded the value of cured provisions."<sup>2</sup> Freights down the river to New Orleans were much less. A rate of \$1.50 a barrel for flour from Louisville to New Orleans was made as early as 1814. The rate up the river was over \$100 a ton up to 1819.<sup>3</sup> Niles mentions the fact that so low a rate as \$37.50 a ton on freight from New York to Buffalo, was made in 1820.<sup>4</sup> But that this was very exceptional is proved by the seaboard and Pittsburg prices for bar iron in that year. The seaboard prices were from \$90 to \$100 a ton, the Pittsburg prices \$190 to \$200, the Cincinnati price about \$220.<sup>5</sup>

Under such conditions of transportation the economic isolation of the people west of the Appalachians is hard to realize. One who knew it by experience said: "Under such disadvantages the *commerce of the country was nominal*, and nothing but necessity prompted the inhabitants to engage in it. The farmer had no motive to increase the product of his fields beyond the wants of his family and of immigrants or 'new comers,' as they were called, who might settle in his immediate neighborhood. For many years these immigrants created the only demand which existed in the interior settlements for the surplus products of agriculture."<sup>6</sup> The people on the Atlantic were not so cut off

<sup>1</sup> RINGWALT, *Development of Transportation Systems in the United States*, pp. 21, 33.

<sup>2</sup> ANDREWS, *Report on Colonial and Lake Trade*, 1852, p. 278.

<sup>3</sup> RINGWALT, p. 18.

<sup>4</sup> *Niles' Register*, vol. xx. p. 215.

<sup>5</sup> *Report of Committee on Iron to Convention of Friends of Industry in New York*, November 1831, pp. 17, 18.

<sup>6</sup> RINGWALT, p. 18.

from each other, and over three eighths of our merchant marine was devoted to the coasting trade. The economy of this means of transportation is indicated by the bulky and heavy character of some of the goods taken from the northeastern states to New Orleans. Among other articles may be noted lumber, bricks, building stone, lime, hay, oats, candles, soap, cider, salted fish, potatoes, furniture, carriages, etc.<sup>1</sup>

In the calendar year 1820 the imports of European manufacture retained for home consumption did not amount to 20 million dollars. Four years before, in the fiscal year 1816, they had amounted to nearly 100 million dollars. The average American had decreased his annual purchases of such commodities from twelve dollars to two dollars. The inability to pay for a larger supply was undoubtedly the cause of this economy. Industrial efficiency had not advanced sufficiently in the United States to enable the people to satisfy most of their own wants. Their inability, because of the economic, industrial, or political conditions of the period, to supply the wants of other countries made it necessary that many of their wants should go unsatisfied. That these conditions, as a whole, should be so unfavorable naturally occasions some surprise. There were more lands opened for cultivation than ever before. The number of those able to work had never been so large. The mechanical contrivances for making the work effective had never been so numerous. Competent men, at the time, were of the opinion that there was as much specie in the country as there had ever been.<sup>2</sup> The industry of the country had not been embarrassed

<sup>1</sup> *American State Papers, Commerce and Navigation*, vol. ii. p. 412.

<sup>2</sup> *Niles' Register*, vol. xviii. p. 36. The data brought together by Gallatin about ten years later show quite conclusively that the specie in the country had increased during the preceding decade and that there was probably more than half as much specie as bank currency. Gallatin estimated that the banks held 15 million dollars in specie in 1811, 17 million dollars in 1815, 19 million dollars in 1816, and about 20 million dollars at the end of 1819. The report he used from the United States Bank does not show the two million dollars added to its reserve by importations in 1820. See *Writings of Albert Gallatin*, vol. iii. pp. 291, 358, 363. Secretary Crawford had made an estimate in 1820 that confirms the later work by Gallatin. See *American State Papers, Finance*, vol. iii. p. 494. His estimate that there were 28 million dollars in specie in the country in 1813 is completely refuted by Gallatin's more exact data.

by the withdrawal of foreign capital, as the total investments of such capital in this country were insignificant in amount.<sup>2</sup> All these conditions seemed favorable to prosperity, yet the country was in a state of economic collapse, of which one of the most striking features was the great decline in foreign trade.<sup>3</sup>

What advantages possessed by the country during former periods of prosperity and foreign trade activity had been lost? In the early years of the century the Napoleonic wars had given her special advantages as a carrier of ocean freights, and had also, at times, created enough of a demand for bread-stuffs to render their exportation from the United States profitable. These two means of payment enabled the country to import European commodities in considerable quantities for several years. The coming of peace and the establishment of discriminating duties in many countries materially changed these conditions. The relative superiority of our merchant marine, though based on unquestioned excellence of seamanship and unequaled supplies of shipbuilding material, was largely counteracted by the effects of the hostile tariff legislation of Europe.

Following the loss of these advantages, there appeared, during the years 1815-1818, an extraordinary resort to credit in our foreign trade. The excess of imports over exports in 1816-1818 amounted to 100 million dollars.<sup>3</sup> Niles was of the opinion that a similar amount due on foreign accounts was defaulted between 1815 and 1820.<sup>4</sup> It is hardly necessary to say that, with such evidence as this of the lack of financial

<sup>2</sup> It was claimed that there were 30 million dollars in American stocks held abroad at this time. *Niles' Register*, vol. xx. p. 273. If this estimate is correct it is probable that these holdings were to a large extent offset by English securities held here, large purchases of such securities having been made during the War of 1812. *Writings of Albert Gallatin*, vol. iii. p. 283. See article, "The Beginnings of American Financial Independence," in this JOURNAL, March 1898.

<sup>3</sup> McMASTER, *History of the United States*, vol. iv. chap. xxxvi. gives a detailed account of the "hard times" prevailing from 1818 to 1821.

<sup>3</sup> This difference between exports and imports is given as the result of a consultation of the public records by a congressman in 1820. *Niles' Register*, vol. xviii. p. 228.

<sup>4</sup> *Niles' Register*, vol. xix. p. 41.

integrity in the country, European nations would for many years hesitate to send to the United States cargoes greatly exceeding in value those received in return.

The United States was not disposed to sit silent under the restrictions placed upon her merchant marine by foreign legislation. For twenty-five years this marine had constituted the most important factor in the growth of national wealth. It is true that the tariff act passed by the first congress was intended to develop our domestic manufactures. Men at that time, however, had no conception of the intensity of the commercial and industrial rivalry which was to result from the introduction of the machine and the factory. It is probable that the duties levied would have been entirely insufficient to counteract Europe's advantages in larger capital and cheaper labor, even under the ordinary conditions of the period. Certainly they must have been very much higher to divert capital and energy to domestic manufactures in view of the abnormal profits which the Napoleonic wars brought to the American carrying trade. They enjoyed almost a monopoly as neutral carriers during this period. It was hard to make a venture so rash that it would involve loss. Wealth was accumulated in New England with wonderful rapidity, and the people there naturally came to believe that the welfare of the nation was bound up in the preservation of its foreign commerce. Even national pride and honor became a secondary consideration, and it is probable that war would not have been declared in 1812 had it not been for the aggressive spirit of the West, which at that time first found expression in the national councils.

At the close of the war conditions became normal, or at least such as are characteristic of extended peace. Europe declared her independence of American breadstuffs and shipping, and proceeded to enforce that declaration. Congress recognized the need of immediate action, and in 1818 passed an act offering reciprocity in navigation to other countries. These terms were accepted voluntarily by some countries and by others under compulsion of the legislative reprisals in the navigation laws of

1818 and 1820. Much of the relative economic superiority naturally belonging to our merchant marine was thus restored, and for several decades its services constituted a considerable part of our payments for foreign commodities.

But if an agricultural nation is to carry on any considerable commerce with the outside world it must necessarily involve the exportation of farm products; and we naturally turn to consider whether conditions were such as to encourage farmers in the United States to attempt to supply the world market. As a rule the cost of transportation of farm produce from any distance to the seaboard, was greater than the value of the produce when delivered. Robert Fulton, at an early day, enumerated the following products of the interior of the country, "wheat, flour, oats, barley, beans, grain, and pulse of all kinds, cider, apples, and fruit of all kinds, salt, salted beef, pork and other meats, hides, tallow, beeswax, cast and forged iron, pot and pearl ashes, tanner's bark, tar, pitch, rosin and turpentine, hemp, flax, and wool, plaster of paris, . . . marble, lime, and timber." He states that none of these articles could pay transportation bills of five dollars per hundredweight.<sup>1</sup> One might draw up a much longer list of the products of the Mississippi valley in 1820, but the cost of transportation as indicated by data already given was still five dollars per hundredweight from Buffalo to New York City. The heavy cost of transportation was no less effective in increasing the expense for commodities consumed by the farmer than it was in reducing the return for his products. Foreign countries were allowing drawbacks and paying premiums and bounties on exports to the United States to such an extent that their wares were selling in our seaports at prices even below their first cost, if we can trust a numerous array of witnesses.<sup>2</sup> Yet in spite of this fact, the farmer who brought his products to Pittsburg had to give a bushel and a half of wheat for a pound of coffee; a barrel of flour for a pound of tea; and twelve and

<sup>1</sup> RINGWALT, p. 15.

<sup>2</sup> H. H. HYNDMAN, *Commercial Crises of the Nineteenth Century*, p. 20. *Annals* XVI Congress, first session, vol. ii. p. 1980.

a half barrels for one yard of superfine broadcloth.<sup>1</sup> That the farmer had any produce left to exchange for these foreign goods seems remarkable when we consider that in parts of Ohio he must give four bushels of wheat for a yard of domestic cassinet and twenty for a pair of boots. It was reported that in Kentucky wheat sold for twenty cents and corn for ten cents in specie.<sup>2</sup> It has already been noticed that the products of the western farm could at no time pay the expense of transportation to the eastern market, and as late as 1820 flour manufactured from grain grown in central Pennsylvania netted the producers only \$1.25 per barrel when marketed in Baltimore.<sup>3</sup> The development of steamboat transportation on the Mississippi and Ohio gave the farmers near those rivers, at times when circumstances were most favorable, a profitable market in New Orleans. In January 1820 fresh beef from Kentucky was sold in the southern market. In that year, it is said, there were already seventy-two steamers on the western rivers. The result of this increase in the means of transportation was shown in heavy shipments from the North, the sales of which failed to pay the expenses of transportation.<sup>4</sup>

The handicap on the farmers of the interior was increased by the position of the southern cotton planters. Their plantations, up to 1820, were so near to tide water that transportation constituted only a small part of the expense of production. The steadily increasing European demand for cotton, while beneficial to the cotton planter, had a disastrous effect on the market for northern farm and factory products in the South. The cotton ships on their return from Europe carried freight at the very lowest rates in preference to sailing in ballast. This enabled the French farmer and manufacturer even of bulky commodities to meet the American producer in successful competition in the New Orleans

<sup>1</sup> *Pittsburg Mercury*, quoted in *Niles*—vol. xx. p. 180. It does not seem surprising that a footnote in the returns for the Digest of Manufactures in Jefferson County, Ohio, says, "The people of the country are determined to use our fabrics in preference to foreign." *American State Papers, Finance*, vol. iv. p. 198.

<sup>2</sup> *Niles' Register*, vol. xix. p. 16.

<sup>3</sup> *Ibid.*, vol. xx. p. 97.

<sup>4</sup> *Ibid.*, for 1820.

market. The list of French commodities on sale there in 1819 included among others such articles as sausages, butter, cheese, bricks, tile, hollow cast iron, etc.<sup>1</sup> Moreover, the tariff legislation of Europe was far more successful against our farm products than when turned upon our merchant marine. The flour which in 1820 netted the producers but \$1.25 per barrel in Baltimore paid into the treasury of Spain a revenue of three times that amount if exported to Cuba. This is a fair example of the tariff during that period on nearly all food products of the temperate zone which sought a market in foreign ports.<sup>2</sup>

A third, and probably more important hindrance to the development of an export trade in agricultural products was to be found in the character of the people themselves. Their sanguine disposition, their fondness for speculation, in short their overweening desire to get something for nothing was already exhibiting disastrous results. On every side in stay laws, exemption laws, and sheriff's sales, the story is plainly told that the term agricultural industry had not been used to indicate plodding effort devoted to the production of foods for the world market. Farmers undoubtedly gave a part of their time to supplying the demands of the market, but it would seem that they depended for most of their expenditures upon the more exciting occupation of "buying land cheap and selling it dear." This pursuit had been followed with eminent success during the boom that lasted from 1815 to 1819. Now the tables had turned and for years to come a desperate struggle was to be carried on in maintaining the fictitious values created by speculation. The passage of unconstitutional laws in favor of the debtor, the subversion of the courts when they failed to sustain such laws, the establishment of a state bank for the special purpose of making loans to owners of mortgaged lands, the sale of its notes when issued at a discount of 30 per cent.,<sup>3</sup> such is the record which is literally true for the State of Kentucky alone, but which is a fair type of

<sup>1</sup> *American State Papers, Commerce and Navigation*, vol. ii. p. 412.

<sup>2</sup> HYNDMAN, p. 20.

<sup>3</sup> *Niles' Register*, vol. xx. p. 223.

the procedure in all those states where new lands were coming rapidly into cultivation.

Evidently the United States could not look forward to any considerable exportation of the food products of the interior until the expenses of transportation should be greatly decreased, the tariff restrictions on their importation into foreign countries in some degree relaxed, and the over-capitalization of its farm lands much reduced. These hindrances to economic prosperity confronted over half the population of the country, and it is worth while to consider by what methods and in what spirit they were met.

The American pioneer was indeed fond of speculative gains, but this was by no means his only striking characteristic. His fondness for economic independence and for enterprises in which his own will furnished the initiative to every application of effort, affords us the only satisfactory explanation of his chosen mode of life. What that life involved in many cases is vividly portrayed in the words with which John Randolph sought to characterize the supporters of the tariff act of 1824. He said: "Men in hunting-shirts, with deerskin leggings, and moccasins on their feet want protection for manufactures—men with rifles on their shoulders and long knives in their belts, seeking in the forests to lay in their next winter's supply of bear meat."<sup>1</sup> Such men as these and the descendants of such men, had gradually pushed the frontier of American settlements from the Atlantic seaboard far out into the central valley of the continent. When the difficulties of transportation are taken into consideration it is correct to say that already half the people of the country were living at a considerable distance from the sea. The progress they had made in the economic subjugation of the domain into which they had entered was remarkable. It is a matter of no surprise that the American characteristics of self-dependence and self-confidence found their earliest and fullest development and expression under such circumstances. It is true that they had no direct interest in the earnings of the merchant vessels of New England,

<sup>1</sup> *Annals of Congress*, XVII Congress, first session, vol. ii. p. 2370.



yet one cannot doubt that it was the presence of a national spirit, too strong to submit to what they considered intolerable aggression and unjustifiable breaches of faith on the part of England, that caused them to force the country into the War of 1812. If the economic risk to themselves had been as great as it was to New England, they would have pursued the same course.

These men already felt that the economic interests of the country should be considered as a unit. They had an unquestioning and almost boundless faith in the future wealth of the territory in which they lived, but nothing approaching its immediate realization could be attained by them without the aid of the accumulated capital of the eastern seaboard. Their only hope for the common comforts of civilization lay in bringing the consumer and producer nearer together. If American capital and enterprise could be persuaded to flow inward instead of outward, to apply itself to inland transportation and manufactures instead of foreign commerce, they had the fullest confidence that our own remarkable resources would give such capital and enterprise higher rewards than they had ever before attained.

The vote on the tariff act of 1816 enables us to locate more exactly the strength of this movement for the development of our resources. The states of New York, Pennsylvania, New Jersey, Vermont, Kentucky, and Ohio cast fifty-six votes for the bill and only seven against it. It is true that New York and Pennsylvania are coast states and were, therefore, to some extent directly interested in foreign commerce. Yet they extend so far into the interior that their public sentiment at that time was rather western than eastern. Moreover, New York City and Philadelphia already realized that our internal commerce would, in time, far surpass as a wealth producer, any conceivable traffic with the outside world. They also knew that their own interests were bound up with the development of the latter rather than the former.

The people of the far East were not able to look at the matter in this way. It might have been said in 1816 as John Randolph

said in 1824: "When we look to Salem and Boston, to parts of the country where skill and capital, and industry notoriously exist, we find opposition to this bill."<sup>1</sup> The national spirit of the South had been thoroughly roused by the war with England, and though it could see no direct profit to itself in the measure, a desire for greater industrial independence on the part of the nation led its statesmen to join hands with the middle states and the West in passing the tariff act of 1816. The generosity of the South at this time was the decisive factor which determined that a protective policy should dominate the legislation of the country for many years. The tariff bill of 1820 failed to pass. The act of 1824 would have met a like fate had it not received decisive support from New England. This support was undoubtedly due to the remarkable development of the cotton industry from 1821 to 1824, under the stimulus of the heavy protection afforded by the act of 1816.

The great agricultural population of the country proposed to solve the difficulties which confronted it, as follows: They proposed to give to American inventiveness, capital, and industry the greatest possible inducement to apply themselves to improvement of the methods and reduction of the cost of inland transportation. They proposed to meet foreign legislation that restricted our opportunities for exporting agricultural products and carrying ocean freights, by domestic legislation that would restrict the importation of foreign manufactures into the United States, and that would retaliate in full for discrimination against our merchant marine. They proposed by a protective tariff to give capital an opportunity for enterprise in domestic manufactures, which they confidently believed would in time afford a home demand for farm products sufficient to justify the highest values that had been placed upon their lands.

This leads to the consideration of the manufacturing industry from which so much was hoped. There had been some manufacturing even in the colonial period. Washington watched the development of certain industries in the New England states in

<sup>1</sup> *Annals of Congress*, XVII Congress, first session, vol. ii. p. 2370.

the years immediately following the Revolution with the keenest interest. The framers of the tariff act of 1789 were confident that it would warrant a free application of capital to manufacturing. The reasons for its failure to do so have already been noted. Yet even under this act the illegal seizures of American merchantmen by the ships of England, France, and Spain discouraged some of the more timid mariners and caused the investment of small amounts of capital in manufacturing. The embargo act increased these investments considerably, and the War of 1812, which for a time caused an almost complete cessation of foreign trade, was attended by marvelous development in domestic manufactures. It seemed, therefore, when the act of 1816 was passed that a good start had already been made toward the industrial independence so desired by a majority of the population. Their bright anticipations were not to be realized for many years. With the coming of peace England expected a large increase in the demand for her manufactures on the continent, and increased her output accordingly. But peace closed the markets of the continent to English manufacturers much more effectively than war. The goods shut out of the European markets were sent to the United States and sold for whatever they would bring on terms to suit the purchaser. How unprofitable this method of disposing of their surplus product resulted has already been noted.<sup>1</sup> Our imports from England in the years 1815-1819 were 104 million dollars in excess of what they would have been if the proportion to our total imports had been the same as during the third decade of the century. It is probable that the importation of this 100 million dollars' worth was the direct result of the forced exportation. As a consequence of these extraordinary importations the market for domestic manufactures during those years was practically ruined, and, as if this were not enough to destroy all the progress made during the favorable conditions of the War of 1812, a remarkable European demand for our agricultural products offered great inducements to turn the capital formerly used in manufactures into

<sup>1</sup> See page 40.

agricultural channels. So strong was this demand that the average annual export of wheat and flour for the years 1817 and 1818 was 15.5 million dollars, or three times the annual average during 1821-1830. In spite of these discouraging circumstances considerable investment of capital in manufacturing industries was being made. As early as 1818 the largest woolen factory, and the one best supplied with machinery in the United States, was located in Kentucky. The capital invested was \$150,000 and its supposed annual capacity \$400,000 worth of cloth.<sup>1</sup> In 1817 \$80,000 capital was put into an enterprise in Cincinnati, whose annual product under favorable circumstances amounted to \$150,000, the largest item being steam engines.<sup>2</sup>

There are no data from which a satisfactory estimate can be made of the amount of manufactures produced in 1820. The census returns enable us to get some idea of the relative importance of different industries in different localities. The digest of manufactures contains returns in regard to 2895 employees in Rhode Island. Ninety-two per cent. of these were employed in the cotton industry and over half of the remainder in woolen factories. The relative importance of leading industries in Massachusetts, based on returns of 4465 employees, is indicated by the following percentages: cottons, 49; woolens, 11; paper, 9; and iron, 3. Of 3321 employees in Connecticut 39 per cent. were employed in the cotton industry, 14 per cent. in the manufacture of mechanical appliances and tools, 16 per cent. in the woolen industry, 3 per cent. in iron, and 8 per cent. in paper. The returns from eight of the leading manufacturing states show that twice as many employees were engaged in the cotton as in the iron industry, and three times as many as in woolen manufacturing. Other contemporary testimony seems to warrant the acceptance of these figures as indicating the relative importance of the industries and in some degree their relative prosperity. Gauged by the same standard, the leading manufacturing industry in Ohio was the manufacture of malt and spirituous liquors,

<sup>1</sup> *American State Papers, Finance*, vol. iv. p. 179.

<sup>2</sup> *Ibid.*, vol. iv. p. 196.

though the iron industry was a very close second.<sup>1</sup> The importance of the textile industries is indicated by the experience of a Philadelphia loom-maker, who reported that his product of seventy looms a week was not nearly equal to the demand.<sup>2</sup> The people of Rhode Island were in 1821 congratulated on the prosperity of their extensive cotton mills. Philadelphia at the same time was investing in cotton looms at an unexampled rate. Paterson, New Jersey, reported that, while two years before three of her sixteen extensive factories were running, now nearly all were in active operation.<sup>3</sup> In 1822 the annual dividend of the Waltham cotton factory was 25 per cent.<sup>4</sup> *Niles' Register* announced in June 1822 that new cotton mills were everywhere being erected or old establishments being improved.

The shipbuilding industry was already of such recognized importance that satisfactory information is easily obtained as to the tonnage produced and as to territorial distribution of the product. Maine led the list, producing nearly one third of the entire tonnage of sailing vessels. Massachusetts produced nearly one fourth of the total. New York, Maryland, and Louisiana held the third, fourth, and fifth places as builders of sailing vessels. The total product of the country was nearly 52,000 tons, worth about three million dollars.<sup>5</sup>

On the whole, the manufacturers who suffered so severely during the apparently splendid advance of agricultural interests following the War of 1812, were now in much the better position. There was an abundant supply of cheap labor, loanable funds were seeking investment at lower rates than ever before known in this country, the raw materials of the different industries shared in the general decrease in the value of the products of all extractive industries, the feeling in favor of tariff protection for manufactures was increasing, and the legislation of Europe was of

<sup>1</sup> *American State Papers, Finance*, vol. iv. p. 28.

<sup>2</sup> *Niles' Register*, vol. xx. p. 17.

<sup>3</sup> *Ibid.*, vol. xxi. p. 39.

<sup>4</sup> *Ibid.*, vol. xxii. p. 25.

<sup>5</sup> Letter from Commissioner of Navigation, E. T. CHAMBERLAIN.

such a nature as to convince the American farmer that a home market was the only one that he might hope for in the future.

Such a view of the possibilities of our foreign trade was not altogether warranted. The returns for the fiscal year 1821 indicated some small improvement already in progress. In that year the total imports of the United States amounted to 63 million dollars. We re-exported 21 million dollars' worth of foreign products. This means that in about one third of its foreign trade, the United States practically acted as an agent in transactions between other countries. We exported 20 million dollars in cotton, an amount sufficient to pay for nearly one half of all goods imported for domestic consumption. The exports of products of the sea, of domestic manufacture, and of the forests were respectively two, three, and four million dollars. Fifty-eight per cent. of all our exports were sent to Europe. Sixty-three per cent. of our imports came from there. Our deficit in the European trade was made good by the Asiatic trade, which took 14 per cent. of our exports and returned only 8 per cent. of our imports. The exports and imports to and from Africa and parts of the American continent other than the United States were very nearly at an equilibrium. The trade with the western hemisphere was about twice as large as that carried on with Asia, but hardly half that with Europe. About three fifths of the goods retained for home consumption were manufactures. Among these cottons held the leading position as to imports by a very narrow margin above woolens. Woolens by about the same margin were first as to the amount retained for home consumption. One fourth of the importations of cottons and of silks were re-exported. One half of the sugar and coffee imported was reshipped. Practically all the other imports of food products were for home consumption, though some of the molasses was re-exported in the form of rum. At least one fourth of the imports retained for home consumption were food products. The use of the term food here may be somewhat strained, since one third of the amount was made up of malt or spirituous liquors, while tea and coffee, with the sugar to sweeten

them, and molasses (a large part of which was turned into rum) made seven eighths of the remainder. The large movement of gold and silver is one of the striking features of the year's trade. Eight million dollars were imported and 11 millions exported. The excess of exports in this item shows that economic conditions were such that the United States did not choose to return current products for the foreign commodities imported, but found it to her economic advantage to make payment for the same out of the savings of former years.

The facts so far presented may be summarized as follows: The proportion of the population engaged in farming was so large that the United States may be spoken of as essentially an agricultural nation. Speculative values of farm property and the accompanying extravagance had bankrupted many of the eastern farmers and driven them to new homes in the West. Consequently an area capable of producing much more than the country could consume at that time had been opened up for farming. The difficulties of transportation were such that the expense of carrying the products of the rich farms of the Mississippi valley to the eastern cities far exceeded their value when delivered. The farms on the Atlantic slope, however, produced a surplus for export, which could have been very largely increased had not expensive transportation and foreign tariffs swallowed up all the profits. As a result of these conditions the prices of all products of the northern farms were exceedingly low. The extraordinary advantages of soil and climate enjoyed by the southern planter and his use of water transportation for the comparatively short distance to the seashore, had combined with the rapidly increasing demand for cotton, to maintain that commodity at a very satisfactory price. Seizures, restrictive legislation, and war had made investment in the ocean-carrying trade so unpopular, and mechanical inventions had made the operation of factories so much more feasible, that a considerable amount of capital had been gradually seeking the latter mode of investment ever since the beginning of the century. The tariff of 1816, intended to sustain and encourage this movement, failed

to accomplish its purpose during the next few years, because of European conditions which offered special inducement to American purchasers, because of the great inducement to invest capital in the real estate speculation, and because of the increased prices of raw material. By 1820, however, these conditions were so changed that the agricultural industry, aside from cotton raising, was exceedingly depressed, and the manufacturing interests were evidently about to enter upon a period of prosperity.

In spite of these unfavorable conditions for foreign trade in the United States one is surprised to learn that its total amount was smaller in 1830 than it had been in 1800. From 1821 to 1830, it amounted, in round numbers, to 1600 million dollars. This was 100 million dollars less than for the first decade of the century.<sup>1</sup> In the five years, 1821-1825, it was larger by ten million dollars than in 1826-1830. In the first two years of the decade it was 293 million dollars, in the last two, 291 millions. These facts indicate a slight decline in our foreign trade at a time when an increase was to have been expected, for the expansion in international commerce, which has been so marked a feature of the economic history of the nineteenth century, was already in full progress. Measured in commodities the foreign trade of England increased 50 per cent. from 1820 to 1830. Its annual money value advanced from 75 million pounds sterling during the opening triennium of the decade to 100 millions during the years 1828-1830.<sup>2</sup> Of the seven countries that had a foreign trade in excess of 100 million dollars in 1820 as well as in 1830, the United States was the only one whose foreign trade was declining. France, Russia, Holland and Belgium were extending their international commerce even more rapidly than England.<sup>3</sup> This general expansion of the foreign trade of the world was taking place at a time when most of the nations engaged in it were endeavoring by tariff legislation to develop their own internal domestic industries. The effect of such legis-

<sup>1</sup> These amounts are taken from the official reports.

<sup>2</sup> BOWLEY, *England's Foreign Trade in the Nineteenth Century*. Frontispiece.

<sup>3</sup> MULHALL, *Dictionary of Statistics*.



lation in restricting the extension of trade between different countries appears to have been confined almost entirely to the United States. The reason for this was undoubtedly the abnormal development of our commercial interests during the early years of the century.

The complicated net work of cause and effect which must be untangled in any detailed study of the foreign trade of a country, is, under the most favorable circumstances, little less than appalling. The thread in this snarl which usually requires the most delicate manipulation is the balance for or against the country in its financial account with other nations. Fortunately this perplexing element in the problem can be eliminated before the detail work on the exports and imports of commodities during the third decade of the century is undertaken. It was not till after 1830 that the United States used foreign capital in such amounts that its introduction forced importations and its withdrawal in times of financial stringency abroad, compelled exports not warranted by normal conditions of production. The grounds for the belief that in 1820 American investments abroad equaled in amount the foreign capital invested in the United States, are fully discussed in the article already referred to.<sup>1</sup> It is now in order to review the facts indicating that this condition of things continued throughout the third decade of the century.

During that period our exports of merchandise and specie amounted to \$765,848,782. In addition to this, we sold 117,654 tons of shipping to foreigners.<sup>2</sup> Probably very little of this was sold as low as \$40 a ton.<sup>3</sup> Taking that as the average price, the aggregate value would have been \$4,706,160. The large earnings of our merchant marine in carrying freight for foreigners is another credit item in this account. The fleet in service during the decade was equal to 6,783,113 tons employed for one year.<sup>4</sup> If the annual earnings of this fleet be estimated at the very low

<sup>1</sup> See this JOURNAL, vol. vi. p. 187.

<sup>2</sup> *Report of Commissioner of Navigation*, 1897, p. 347.

<sup>3</sup> See discussion on prices of shipping in this JOURNAL, vol. vi. p. 193.

rate of  $\$33\frac{1}{3}$  a ton,<sup>1</sup> the total obtained is, in round numbers, 225 million dollars. The freight earned by carrying imports into the United States, as well as that paid to foreigners on imported goods, must be subtracted from the total earnings of the fleet in order to obtain our net credit from the ocean carrying trade. Our imports were, in round numbers, 800 million dollars. The expenses of importation were estimated by competent contemporary authority at 10 per cent.<sup>2</sup> Subtracting the 80 million dollars freight on imports from the 225 millions of total earnings, we obtain a net credit through the operations of our merchant marine, of 145 millions.

This amount was made up of two items, freight on our own exports and the earnings on freight between foreign nations. Gallatin estimates our freight earnings on exports at a little over 16 per cent. of the value carried.<sup>3</sup> At 15 per cent. the earnings for the decade would have amounted to 100 million dollars. At that time a ship was expected to make three European voyages annually. Taking this as the average length of voyage for ships engaged in our own carrying trade, we find by dividing the total domestic tonnage entered and cleared in the decade, by six, that less than three fourths of our ships were needed for that trade. But, on the chance that this may be an underestimate, let us say that four fifths were so engaged. This would leave one fifth of the whole number free for freighting between other countries. This is just the number required to earn the remaining 45 millions at the assumed rate of  $\$33\frac{1}{3}$  a ton. There were credits arising from several other sources, of which the amount cannot be estimated. Gallatin enumerates them as follows: "Those arising from the fish which, from the bank, is carried directly to foreign ports; of the whale and spermaceti oil, sold by the fishing vessels in South America; of the furs collected on the northwest coast and sold in China."<sup>4</sup> The total of the three items, of which estimates have been made, is 915.5 million dollars.

<sup>1</sup> See discussion on prices of shipping in this JOURNAL, vol. vi. p. 194.

<sup>2</sup> *Senate Document, No. 55, XXII Congress, first session, vol. ii. p. 29.*

<sup>3</sup> *Ibid.*, p. 21.

<sup>4</sup> *Ibid.*, vol. i. p. 21.

The total amount of merchandise and specie imported in the decade, according to the government returns, was \$798,632,565. If the law was strictly followed this amount included 10 per cent. on nearly the entire value imported and 20 per cent. on the rest, to cover the estimated charges on importation. A large part of this went to the American merchant marine and should not be included as a charge in the international account. There is some doubt as to whether this addition to import values was always made.<sup>1</sup> On the other hand there is no question but that there was much fraudulent undervaluation of imports. Neither of these sources of error, which operate against each other, can be accurately determined, but it does not seem probable that the fraudulent undervaluations could have exceeded in amount the additions made for freight really earned by the Americans themselves. Another indeterminate debit item arose from the expenditures of American travelers abroad. It hardly seems possible, however, that these could, at that time, have exceeded in amount, the importations by immigrants into the United States.

There was one serious error operating to decrease the valuation of imports, the effects of which can be estimated with some degree of accuracy. This was the undervaluation of the pound sterling in the treasury department. In getting the amount of English invoices, a pound sterling had been considered equal to \$4.44, though its average value for the decade was about 10 per cent. more than that. English imports amounted to over 300 million dollars for the decade. We ought therefore to add at least 30 million dollars to the total value of imports, given above.

Even with this addition, the total of debits against the United States for the decade, amounted to not quite 830 million dollars, or 85 millions less than the total credits.

Gallatin attacked this problem in a somewhat different manner, as early as 1831, and reached the conclusion that "the amount of exports including freight and those items which can-

<sup>1</sup>*Congressional Debates*, 1831-2, p. 3214.

not be ascertained, has certainly exceeded that of the imports."<sup>1</sup>

The balance in favor of the United States obtained above was undoubtedly seriously reduced by the profits made by foreigners on business carried on in the United States. It is hardly possible, however, that these profits could have been sufficient to turn the balance against us. It is a matter of no surprise therefore, that in 1830 *Niles' Register* declares all the world in debt to the United States. Exchange on England, France, Havana and South America, was at a discount.<sup>2</sup>

The imports and exports of the precious metals during the decade was of a character to strengthen the opinion that the United States was financially independent. During the years of panic and crises preceding 1821, her stock of metallic money had been considerably increased. As a result, the supply of such money, at the beginning of this decade, made up over one third of the entire currency. At that time, as ever since, a currency largely composed of metal was not acceptable to the American people. The facts that by far the larger part of the metallic money in the United States was silver, and that the wide territorial distribution of our people called for a money which could be transported over long distances with safety and economy, explain, in part, their preference for a paper currency.

Langdon Cheves, and the other men who controlled the issue of bank notes from 1821 to 1825, were decidedly opposed to the expansion of the currency.<sup>3</sup> The precious metals in the country were much in excess of the amount required for bank reserves unless such expansion was to be made. It followed that the export of gold and silver as merchandise, irrespective of the condition of international credit balances was to be expected.

Such an export began in 1821 and continued throughout the first half of the decade. The exports for the five years

<sup>1</sup>*Senate Document, No. 55, XXII Congress, first session, vol. I. p. 21.*

<sup>2</sup>*Niles' Register*, vol. xxxviii. p. 326.

<sup>3</sup>There was a considerable increase in the issue of bank notes in New York in 1824.

amounted to 43.5 million dollars, the imports to only 31.2 millions, the net export for the period being 12.3 millions. The net import of merchandise during the same years amounted to 25.2 million dollars, so it is evident that the excess of the precious metals exported must have been supplemented by freights and other items already discussed, in order to preserve a balance in the current transactions.

It is probable, however, that the result of all transactions for the five years was a net credit to the United States. This much is sure. In England, where, if anywhere, an unfavorable balance might be expected, the purchasers of our products were failing, in 1825,<sup>1</sup> to meet their obligations to American merchants. The large net exports of the precious metals during this period from a country which did not produce her own supply, suggests at once the liquidation of obligations. But if there was any foreign capital in use in the United States it must have been European, and yet in these same years Europe sent us \$8,032,000 in gold and silver, while we returned only \$5,847,000.\* In two years of the five our exports to Europe were greater than our imports. In 1822 the movement of commodities between the United States and Europe resulted in a balance against us of over ten million dollars. It is not surprising, therefore, that in part payment of this balance there was a net export of the precious metals to Europe, amounting to three quarters of a million. Again, in 1825 there was a net export of a million dollars to Europe, but this would have been unnecessary if the English cotton speculators had paid for the 30 million dollars worth of American cotton they imported that year. During the last five years of the decade, the stock of gold and silver in the United States increased faster than it had decreased in the first. The panic of 1825, though by no means a serious matter in the United States, had shown the need of a larger metallic basis for our credit system. In 1826 our net imports of the precious metals were nearly two million dollars. In the

<sup>1</sup> *Niles' Register*, vol. xxix. p. 147.

\* See Appendix p. 144.

last two years of the decade the net imports were nearly nine million dollars. These large importations of specie, immediately following the year 1828, in which the balance on the movement of commodities had been nearly 17 millions against us, indicate that the country was in a very strong position financially.

To some the facts that have been presented will form a sufficient basis for the conclusion that at no time during the third decade of the century was there any considerable amount of foreign capital invested in the United States. Our discussion has, at least, established the fact that imports were at no time materially increased by the desire of European capitalists to transfer their investments to this country. It is also evident that the return of such investments at no time forced exportations of domestic commodities not warranted by our differential advantages in their production. It therefore justifies the entire disregard of the financial account in the detail study of the foreign trade statistics from 1820 to 1830, which is now to be undertaken.

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## THE RACES OF EUROPE.<sup>1</sup>

It appears at first sight an anomaly that the first thorough anthropological description of the populations of Europe—with parts of Asia and Africa—should be exported from America, and the further fact that such a work has been constructed in Boston may seem to lend color to the time-honored theory that that city is indeed the hub of the universe. The real anomaly is, however, that American students have so long and so thoroughly neglected the study of the physical and psychological characteristics of the different populations from which our own was formed and from which it is constantly recruited. For our theoretical interest in the matter ought to be as great, and our practical interests are even greater than those of the European nations themselves. And as for the human material for such studies, every passenger ship brings it to our shores, and cities like New York and Chicago offer unrivaled opportunities for comparison between the different races. Yet the attention given to the study of men as such has been ridiculously meager in proportion to that given to various single aspects of their activity and history; and even among the anthropologists, with the exception of a short period after the Civil War, anthropology has meant mainly the study of the aborigines. The study of the races, as distinct from merely political or linguistic groups of Europe has, indeed, been sadly neglected until lately in Europe itself; perhaps on the theory that, if not all men, at least all Europeans, are approximately equal; perhaps with the idea that the living population can as well be studied later on, when leisure can be had from the examination of the more perishable data of the ethnology of savage or barbarous peoples—an idea utterly erroneous, from the fact that with modern transportation and the growth of cities the separate groups of population are losing their individuality, and from the further fact that under the play of natural selection the character of the population is

<sup>1</sup> WILLIAM Z. RIPLEY, *The Races of Europe: A Sociological Study* (Lowell Institute Lectures), 8vo pp. xxii + 624. Accompanied by *A Selected Bibliography of the Anthropology and Ethnology of Europe*, pp. x + 160. New York, D. Appleton & Co., 1899.

A large portion of the present work was first published in *Appleton's Popular Science Monthly*, 1897-1899, under the title, "The Racial Geography of Europe."

rapidly changing in many regions and in many social categories. In point of fact, the anthropology of living populations is one of the studies which has a strong claim to immediate prosecution, on the basis of the theory that science should collect, first of all, the data which are needed for its further progress, but which are in danger of slipping through its hands. In recent years there has been some realization of this fact, and extensive studies of the living population of various sections of Europe have been undertaken, partly under government patronage and partly through the untiring efforts of individual scientists. These researches have already yielded a descriptive knowledge of the populations of large parts of Europe. They have, secondly, thrown new light on many historical problems, and they have, lastly, suggested certain hypotheses as to the psychology of the different racial elements, which hypotheses, if they are confirmed by further investigation, must become the prolegomena of any solid science of sociology.

For all these reasons Professor Ripley's work, which represents the labor of six years, and which summarizes a large proportion of the results thus far available, ought to be of great interest to all students of history, psychology, and sociology. It is, of course, less directly connected with economic theory, but it has large importance for the problems of social economics in the wider sense. In this review I shall omit as far as possible the matters of more purely anthropological interest, and shall emphasize especially the sociological aspects of the work. I shall speak first of some special features, the typical portraits, the maps, and the extensive bibliography. I shall then give a summary of the descriptive material, with some remarks on certain of Professor Ripley's interpretations. Thirdly, I shall comment upon his theories of the origin and development of the different races and peoples, bringing his views in these matters into relation with those maintained in the still more recent monograph of Lapouge.<sup>1</sup> Lastly, I shall have occasion to discuss Professor Ripley's attitude toward anthropo-sociology and the study of the psychological character of the different races.

## I.

A feature of the work that immediately attracts attention is the magnificent series of portraits typical of the various races and types of

<sup>1</sup> *L'Aryen*, now in press. The reader will find a translation of the introductory chapter, "Old and New Aspects of the Aryan Question," in the *American Journal of Sociology*, November 1899.



humanity discussed. There are more than two hundred of these typical portraits representing usually both the profile and the full face view of half as many individuals selected as representative. Professor Ripley has been fortunate in securing, for this part of the work especially, the co-operation of a large number of anthropologists; and he has well repaid their co-operation by bringing under a single cover the results of so many scattered investigations.

No less excellent in conception and execution is the series of over eighty maps and diagrams with which the text is enriched. A single one of these maps often presents a more accurate and detailed, as well as a vastly clearer and more forcible, picture of a given population than could be embodied in a whole chapter of description. The main facts presented in the body of the work, apart from explanations, could almost be apprehended from a study of the maps alone. They are of immense value not only in clarifying the main facts for the general reader, but in presenting the detailed data of racial geography in a way that enables the student to trace the correlation between these data and the physical features of the country on the one hand, and on the other hand, the political and religious tendencies, the intelligence, culture, and civilization of the different populations.

In this admirable system of graphic representation two features deserve particular mention. One is the reduction to a common basis of the data taken in different countries and under different systems and again of the data derived sometimes from the measurement of crania and sometimes from the measurement of living individuals. Professor Ripley has given close attention to these possible sources of confusion, as is shown especially in his preliminary monograph, *Notes et documents pour la construction d'une carte de l'indice céphalique*;<sup>1</sup> and even if he has in some instances been obliged to resort to "a little healthy generalizing," the results may in general be regarded as approximately correct. Somewhat similar difficulties have been overcome in reducing to a common basis the variously conducted enquiries as to the color of the hair and eyes of different populations.

The other notable feature is the uniform and systematic scheme of shading. Throughout the work the light tints always stand, in maps dealing with head-form, for dolichocephaly; in those representing pigmentation, for light hair and eyes; in those relating to bodily dimensions, for prevaillingly tall stature. The light tints therefore

<sup>1</sup> *L'Anthropologie*, vol. vii. pp. 513 et seq.

almost uniformly suggest the presence in pure or mixed form of the tall, blondish, dolichocephalic race, which people have in mind when they speak of the Teutonic and Anglo-Saxon races; in a word *Homo Europaeus*. Not only this, but the shading is so arranged that in each map each degree of variation in shading stands for an equal degree of variation in the facts recorded, and at the same time, so that in the different maps dealing with the same class of phenomena a given shade represents uniformly the same or approximately the same conditions. Thus for example in each map dealing with head-form, the tints darken in the same ratio as the cephalic index increases; and again as between different maps the same tint indicates approximately the same index. Apart, then, from the subject-matter which they embody, the maps are of value as an example of method in graphic representation.

Some few points of criticism occur in connection with the maps. If not all the maps are constructed in accordance with the general scheme, the reason usually is that the data taken from other authors are in such form as not to allow it. But this excuse does not apply to all the exceptions; the map of head-form in Würtemberg (p. 233) might advantageously have been made to correspond, at least roughly, with the general scheme of shading. Again, the drawing of some of the maps is faulty, notably the maps of average stature in Europe (p. 96) and of cephalic index throughout Europe (p. 53). In both of these maps the river Ems has apparently exchanged its headwaters with the Weser; by the time, however, that we reach the plan of the physical geography of Germany (p. 216) each river has again come into its own. Another imperfection is the lack of a map of cephalic index for certain countries, notably Germany. It is true that the data for this country are somewhat fragmentary, but such as they are, they might well be presented on a somewhat larger scale than they can be in the meager space apportioned to Germany in the author's general map of Europe.

The *Bibliography of the Anthropology and Ethnology of Europe* constitutes a separate volume, which can be used independently and is at the same time an appendix to the main work. It is in itself a considerable achievement. It is in some degree the result of the co-operation of the authorities of the Boston Public Library, an institution which has, perhaps, the most complete collection in the world of books upon this subject. The bibliography contains nearly two thousand titles, arranged by authors and also by countries and subjects, and in many fields is fairly complete. At the few points, however, at

which I have had occasion to test it, I note some rather surprising omissions. If no mention is made of Frederick Nietzsche, it may be because our author does not take very seriously his doctrine of the superiority of "the noble blond beast of prey." A more serious omission is that of any reference to De Gobineau, whose *Essai sur l'inégalité des races humaines* (Paris, 1854) was a pioneer work in its field and still retains its value from many points of view. Two of the essays of A. Drumont are mentioned, but various others as pertinent to the subject are passed over in silence, along with his two principal works, *Dépopulation et civilisation* (Paris, 1890) and *Natalité et démocratie* (Paris, 1898). No mention is made of Novicow, although his *Luttes entre les sociétés humaines* (Paris, 1893), and especially his *l'Avenir de la race blanche* (Paris, 1897) deserves to be included on the score of their subject-matter, if not because of any great intrinsic excellence.<sup>1</sup> It would seem also that Demolins's *A quoi tient la supériorité des Anglo-Saxons?* (Paris, 1897) ought to be noted. Another reference that might be added is Cooley: "Genius, Fame, and the Comparison of Races" (*Annals American Academy of Political and Social Science*, May 1897). Karl Pearson's *The Chances of Death, and Other Studies in Evolution* (2 vols., London, 1897) deserves mention on the score, at least, of part of its contents. C. H. Pearson, by the way, fares little better than his namesake; for his name is omitted from the bibliography, although his *National Life and Character* is referred to in the body of the work in the chapter on colonization. *La population: les causes de ses progrès et les obstacles qui en arrêtent*, by E. van der Smissen (Paris, 1893) should be mentioned, since it treats its subject in part from the racial point of view. Muffang's "Écoliers et étudiants de Liverpool" (*Anthropologie*, 1899, pp. 21 *et seq.*) perhaps appeared too late to obtain a place in the list. Dr. Francis Warner's "Results of an Inquiry as to the Physical and Mental Condition of Fifty Thousand Children Seen in One Hundred and Six Schools" (*Journal Royal Statistical Society*, March 1893, pp. 71 *et seq.*) is surely based on sufficiently extensive material to entitle it to a line or two in the bibliography. It is significant of the state of isolation and unconsciousness of each other's existence that has prevailed between the study of European anthropometry and that of the anthropometry of college students in America that the names of Doctors Hitchcock,

<sup>1</sup> These works of Novicow are, however, included in a list of authorities on acclimatization in the body of the work.

Sargent, and Wood do not appear in Professor Ripley's list. Yet the reports, and still more the records, of the American university gymnasiums contain rich stores of material of interest, especially for the sociological aspects of European anthropology, and a beginning has been made in utilizing such material at Harvard and Stanford universities, as well as under Professor Ripley's own direction at the Massachusetts Institute of Technology. Several studies of the activity and influence of different European nationalities in America should be noted—among others, "The Distribution of Ability in the United States," by Henry Cabot Lodge (*Century Magazine*, September 1891), *Is the Puritan Element Overestimated?* by F. W. Shepardson (Granville, Ohio, 1892), and various writings cited by the latter. In regard to the correlation between the racial and physical characteristics and the psychological tendencies of American school children, the student will have to add to Ripley's list the names of Dr. A. MacDonald,<sup>1</sup> F. W. Smedley, and C. V. Campbell, whose work promises to be of the highest importance. To return to works dealing more directly with European populations, I note that no reference is made to Dietlein's "Über Zahnwechsel und verwandte Fragen" (*Anatomischer Anzeiger*, 1895, pp. 354 *et seq.*), a study which has a broader significance for anthropology than its title would indicate. The *Étude anthropométrique* of Pauline Tarnowsky (Paris, 1889), which is also important for the question of social stratification, has escaped mention. Another brief but important study that has slipped through the meshes of the bibliographical sieve is Havelock Ellis's ethnical analysis of "The Genius of France" (*Atlantic Monthly*, vol. lxxv. pp. 72 ff.). More serious, perhaps, is the omission of Dr. Otto Seeck's *Geschichte des Untergangs der antiken Welt* (Berlin, 1895), one of the few purely historical works that are written with some conception of the effect in society of natural selection. A work the title of which should have secured it a complimentary admission to Ripley's list is Kindere: *De la race et de sa part d'influence dans les diverses manifestations de l'activité des peuples*. Most surprising of all is the failure to mention the important publications of Alfred Fouillée: "La psychologie des peuples et l'anthropologie" (*Revue des Deux Mondes*, March 1895); "Dégénérescence? le passé et le présent de nôtre race" (*ibid.*, October 1895); and *Psychologie du peuple français* (Paris, 1898).

<sup>1</sup> *Experimental Study of Children, including Anthropometrical and Psycho-Physical Measurements.. . .* United States Bureau of Education, Washington, 1899.

The omissions mentioned above concern mainly works important for the sociological aspects of anthropology. Being out of reach of any large library, I am less able to judge of the completeness of the bibliography in the more general field of descriptive anthropology and ethnology. On the side of historical anthropology it is certainly far from complete. I have collected in a footnote the titles of some of the works omitted from Professor Ripley's bibliography which have been utilized by Lapouge in his forthcoming work *l'Aryen*. A few of these works are only incidentally concerned with anthropology, and some few others are of too recent a date for Professor Ripley's compilation, but most of them are of considerable importance. This list may be considered as a supplement to Professor Ripley's bibliography, and that largely on one aspect of the subject; but its length is to be regarded not as a criticism of that work, but as an indication of the richness of the literature and the importance of the subject.<sup>1</sup>

<sup>1</sup> BULWER LYTTON, *Zanoni*, 1842. LATHAM, preface to the *Germania* of Tacitus, 1851. PENKA, "Die Entstehung der arischen Rasse," *Ausland*, 1891. WILSER, "Staatsbaum der arischen Völker," *Naturwissenschaftliche Wochenschrift*, 1898, vol. xiii. p. 361. WEINBERG, *Die Gehirnwendungen bei den Esten*, Dorpat, 1894; *Das Gehirn der Letten*, Cassel, 1896. DE BISSING, "Les origines de l'Egypte," *l'Anthropologie*, 1898, vol. ix. pp. 24 et seq. BERTHELOT, "Sur les mines du cuivre de Sinal," *C. R. Académie des Sciences*, 1896, vol. ii. pp. 365 et seq.; "L'Age du cuivre en Chaldée," *ibid.*, 1897, vol. i. pp. 328 et seq. MARIETTE, *Galerie de l'Egypte ancienne*. SCHIAPARELLI, *Una tomba egiziana della VI. dinastia*, Rome, 1892. BASSET, *Le dialecte de Syonah*, Paris, 1890. LÉTOURNEAU, "La paléographie mégalithique," *Revue Scientifique*, 1897, vol. viii. pp. 142 et seq. FLAMANT, "Note sur les stations . . . de pierres écrites du Süd-Oranais," *Anthropologie*, 1892, vol. iii. pp. 145 et seq.; "Note sur deux pierres écrites," *ibid.*, 1897, vol. viii. pp. 284 et seq. EVANS, "Primitive Pictographs and a Pre-Phœnician Script from Crete," *Journal of Hellenic Studies*, 1894, vol. xiv. pp. 270 et seq.; "Further Discoveries of Cretan and Ægean Script, with Libyan and Proto-Egyptian Comparisons," *ibid.*, 1897, vol. xvii. pp. 327 et seq. VIRCHOW, "Eröffnung prähistorischer Gräber in Worms," *Zeitschrift für Ethnologie*, 1897, vol. xxix. pp. 464 et seq. WEINZIERL, "Der prähistorische Wohnplatz und die Begräbnisstätte auf der Lösskuppe von Lobositz," *Zeitschrift für Ethnologie*, 1895, vol. xxvii. pp. 49 et seq. VAN MUYDEN and COLOMB, *Antiquités lacustres*, Lusanne, 1896. SCHENK, "Étude sur les ossements humains des sépultures néolithiques de Chamblandes," *Archives des Sciences*, 1898, vol. iii. pp. 536 et seq., and another essay, *ibid.*, 1868, vol. iii. pp. 366 et seq. VERNEAU, "Un nouveau crâne humain d'une cité lacustre," *Anthropologie*, 1894, vol. v. pp. 54 et seq. DE BAYE, "Notes sur l'âge de la pierre en Ukraine," *Anthropologie*, 1895, vol. vi. pp. 1 et seq.; "Notes sur l'époque des métaux en Ukraine," *ibid.*, pp. 374 et seq. MEISSNER, *Beiträge zum altbabylonischen Privatrecht*, Leipzig, 1893. DESMOULINS, *Histoire naturelle des races humaines*, Paris, 1826. UJFÁLVY, "Les Huns blancs," *Anthropologie*, 1893, vol. ix. pp. 259 et seq. JOHNSTON, "Race et caste dans

## II.

The first two chapters in the book are introductory in character. Chapter I insists strongly upon the influence of geographical and natural economic conditions upon the type of population and the development of civilization. This chapter reveals already the author's penchant, which appears at various places throughout the work, for tracing historical and social phenomena back to the influence of physical environment. The other introductory chapter discusses the mutual relations of language, nationality, and race. Language often comes to conform to political boundaries, the language of the conquering people being adopted by or imposed upon the inhabitants of the territory absorbed. Customs, folk-lore and tradition are less easily modified, and hence offer better evidences of the origin of any given group. Most stable of all are the physical peculiarities of the people themselves. Race in the physical sense is prior to nationality, language, or civilization; it persists while these may vary; it is the clearest witness of the past.

l'Inde," *Anthropologie*, 1895, vol. vi. pp. 176 *et seq.* DIEULAFOY, *L'Acropole de Suse*, Paris, 1893. HAMDY-BEY and REINACH, *Une nécropole royale de Sidon*, Paris, 1896. FRAIPONT and TIHON, "Explorations scientifiques des cavernes de la vallée de la Meuse," *Mémoires couronnés de l'Acad. de Belgique*, series 8, vol. liv. FAIDHERBE, *Recherches anthropologiques sur les tombeaux mégalithiques de Bosnie*, Bonn, 1866. CHABAS, *Recherches pour servir à l'histoire de la XIX<sup>e</sup> dynastie*, Paris, 1873. PERROT, and CHIPIEZ, *Histoire de l'art dans l'antiquité*. KLUGE, *Die Schrift des Mykenier*, Gotha, 1897. CASTANIER, *Histoire de la Provence dans l'antiquité*, Paris, 1893. LAPOUGE, "Les langues de la Gaule avant les Gaulois," *Bulletin historique et philologique*, 1898, pp. 328 *et seq.* SERGI, "Crani siculi neolitici," *Bolletino di Paletnologia italiano*, 1891, vol. xviii.; "Crani antichi di Sicilia e Creta," *Atti della Società romana di Antropologia*, 1895, vol. ii. SOCIÉTÉ DE L'HISTOIRE DE FRANCE, *Extraits des auteurs grecs concernant la géographie et l'histoire des Gaules*. MARICOURT, "Les sépultures de l'Oise," *Congrès scientifique des Catholiques*, 1888, vol. ii. pp. 710 *et seq.* LIVI, "La distribuzione geografica dei caratteri antropologici," *Rivista italiana di sociologia*, 1898, pp. 415 *et seq.* COLLIGNON, "Observations sur les crânes du Vieil-Altre," *Mémoires de la société d'archéologie lorraine*, 1895. COUTIL, "Cimetière mérovingien et gallo-romain de Muids," *A. F. A. S.*, 1894, pp. 761 *et seq.* HAMY, "Crânes du Boulonnais," *Anthropologie*, 1893, vol. iv. pp. 513 *et seq.* HOUZÉ, "Les Francs des cimetières de Belgique," *Bulletin de la Société d'Anthropologie de Bruxelles*, 1892. VIRCHOW, "Ein im Bette der Lochnitz gefundener Schädel," *Verhandlungen der Berliner Gesellschaft für Anthropologie*, 1895, vol. xxvi. pp. 424 *et seq.*; "Slavische Schädel," *ibid.*, 1895, vol. xxvii. pp. 335 *et seq.* LOUBIER, *Ideal der Schönheit bei den altfranzösischen Dichtern*, Halle, 1890. SCHULZ, *Quid de perfecta corporis humani pulchritudine Germani sæculi xii. et xiii. senserint*, Breslau, 1866. BEDDOE, *Selection in Man*.

The best single test of race in most of Europe is head-form, most simply expressed by the cephalic index or the percentage of the breadth of the head to the length. One strong ground for the advantage of head-form over stature, pigmentation, or facial features as a mark of race is its very inconspicuousness and unobtrusiveness. Anything obvious to ordinary observation may come to be regarded as an element of beauty or as the distinguishing mark of a particular social group, and may therefore be favored by sexual selection, and become thus so modified or intensified that it is no longer a trustworthy sign of race. The form of the head is an inconspicuous trait, and one of which the people generally are quite unconscious, so that it is immune from the possible disturbing influence of sexual selection. Moreover, it is affected far less—if at all—by changes in environment and nutrition than is pigmentation and especially stature, and is hence a far better witness of racial relationships.

The notable point in Professor Ripley's discussion of the color of hair and eyes among European populations is his theory which attributes the lighter tints, often prevailing in the mountainous regions, to the effects of scanty nutrition. As the mountains are pre-eminently the home of the brachycephalic Alpine race, while the plains are, throughout northern and central Europe, the home of the dolichocephalic Teutonic elements, the former regions should, on the basis of racial characteristics alone, show the more brunet population. The reverse of this is more often the case. The explanation of this anomaly must be, according to Professor Ripley, the effect of environment acting through nutrition.<sup>1</sup> It is interesting to compare this with the hypothesis of Lapouge, in one sense complementary to it, that the conditions of urban life tend to darken the hair and eyes.<sup>2</sup> Another explanation of the blondness of mountain populations is that the migration thence to the plains and cities is constantly draining off an element which, while it is tall and dolichocephalic, is also relatively dark.<sup>3</sup>

Stature, as our author shows in detail, is the result of two factors, race and environment. The effect of differences in environment and nutrition is sometimes to intensify and sometimes to obscure or even

<sup>1</sup> Pp. 75-77, 234, 288, 289. (Where no other reference is given, page numbers will always refer to Ripley, *Races of Europe*.)

<sup>2</sup> *L'Aryen*, pp. 39-42. Cf. footnote on p. 84 of this article.

<sup>3</sup> Pp. 555-559.

counterbalance the differences in bodily height that would follow from the racial composition of different populations.<sup>1</sup> For this reason stature alone is a rather irresponsible witness in attempts at ethnical analysis.

Various selective influences also affect the stature of a population. Thus the practice of excusing from military duty all the conscripts below a certain stature, making it easier for these exceptionally short men to marry young, tends to increase the proportion of such defectives in the next generation. Actual warfare is shown, following the data of Collignon, Ammon, and Lapouge, to have a somewhat complicated selective influence. The children born during the Franco-Prussian war were deficient in stature, while those born after the return of the armies were exceptionally well endowed.<sup>2</sup> An important point in this connection, which Professor Ripley fails to bring out, is that in a war of longer duration the more favorable conditions after the conclusion of peace would not, in anything like the same degree, neutralize the unfavorable selection exerted during the war, and the total effect would therefore be a deterioration of the population in stature as well as in general physique and character.<sup>3</sup>

Professor Ripley cites evidence to show that the abnormal conditions of urban life seem to produce a physical degeneracy which manifests itself, among other ways in a decrease of stature among the urban born. This is the more striking from the fact that migrants to the cities usually average taller than the ordinary rural population. It would thus appear that city life for a generation or two has the effect of reducing stature and probably general physique and stamina. This last effect seems, by the way, to be noted by nearly all observers except, perhaps, Dr. Warner, of London, and is clearly established in Baden by the latest researches of Otto Ammon.<sup>4</sup> If Dr. R. Kuczynski<sup>5</sup> and A. F. Weber<sup>6</sup> have recently compelled some modification of the general view of the statisticians that urban populations have to be constantly replenished generation by generation, the explanation is, doubtless, that improved sanitation, the control of contagious disease, the development

<sup>1</sup> Pp. 81-85.

<sup>2</sup> Pp. 87 *et seq.*

<sup>3</sup> Cf. LAPOUGE: *Les Sélections Sociales*, Paris, 1896, pp. 233 *et seq.*

<sup>4</sup> *Anthropologie der Badener*, 1899, pp. 486 *et seq.*

<sup>5</sup> *Der Zug nach der Stadt*, München, 1897.

<sup>6</sup> *The Growth of Cities in the Nineteenth Century*, N.Y., 1899.



of street railways, the abandonment of the old city walls, and the mitigation of the old overcrowding within them, have, during recent years, rendered urban life far more healthful than formerly. If the cities have ceased to be, in Llewellyn-Smith's phrase, "the devourers of the bone and sinew of the country," there is little doubt but that in the past they have been "consumers of men." The data as to the poor physique of urban populations is a link in the chain of evidence that tends to establish this last proposition.

Having presented and analyzed the data of head-form, pigmentation, and stature, for the various parts of Europe, Ripley proceeds to discuss the races which may be distinguished in the varying actual combinations in individuals and populations of these three groups of traits. Following most anthropologists, he sees three great race types, substantially the same as have often been described in this JOURNAL : (1) the Teutonic, or Nordic race, blond, dolichocephalic, and, we may add, aggressive and enterprising — *Homo Europaeus*, in the terminology of Lapouge; (2) *Homo Alpinus*, the brachycephalic, shorter, darker, peasant type centered in the Alps and in Auvergne; and (3) the decidedly dark, dolichocephalic Mediterranean race of Spain and southern Italy.

This chapter needs to be read in connection with the appendix devoted to a summary of Deniker's recent more elaborate analysis of European types. While trenchantly criticising most of Deniker's assumptions of the existence of "races" in Europe other than the three above specified, Ripley accepts his term "Dinaric" to designate the tall brachycephalic type which appears to center north and west of the Adriatic. This is the only one of Deniker's hypothetical additions to the races of Europe with which we need to concern ourselves in this review, limited mainly to the aspects of European anthropology of decidedly sociological significance. The other points at issue between the two writers are mainly the concern of descriptive anthropology and of specialists in that field.

With these three or four principal races in mind, we may summarize very briefly the results of the next few chapters, which deal with the population country by country.

*Homo Europaeus* with a center of dispersion around the Baltic and the North Sea, exists in relatively pure form in Scandinavia, along the Russian coast of the Baltic, in Great Britain, Holland, and north (especially northeast) Germany. This race enters as a considerable element

into the population of the main river valleys of south Germany and of Switzerland. It extends into northern Belgium, the northeast of France, and is found in a certain proportion throughout the valleys and more fertile lowlands of the latter country. In Austria it is apparently concentrated in Vienna and the neighboring region, particularly toward the west. In the mountainous and upland region of central Europe this race is in contact and intermingled with brachycephalic races. *Homo Alpinus* seems to constitute the principal element in France, and *Homo Dinaricus* in the Alpine region proper,<sup>1</sup> in much of south Germany, Austria, and northern Italy. This last race appears also to be represented to a considerable extent in eastern Germany. In Spain, Portugal, and southern Italy the Mediterranean race constitutes the mass of the population. In the regions intermediate between these various ethnic areas, and more or less all over Europe, two or sometimes three of these racial strains blend to form extremely mixed actual populations. The masses of the Russians, as distinguished from the Poles, the Letto-Lithuanians along the Baltic, and the Tartars of the Crimea appear to be a people intermediate in stature, pigmentation, and cephalic index.

Such in barest outline is the net result as regards most of Europe of a vast amount of detail collected from various studies of the population of particular countries and localities. In the interpretation of these data perhaps the most striking feature is Professor Ripley's theory of the part played by sexual selection in creating and fixing the physical peculiarities of various groups of population. His conception is that if any noticeable characteristic, such as stature, color of the hair, eyes, or skin, shape of nose or of other features, comes to be recognized by any social group as in some measure peculiar to itself, the individuals possessing that trait will be preferred in marriage, and that the trait will thus become fixed and intensified generation by generation.<sup>2</sup> Thus the tall stature and blondness of the nobility as compared with the peasantry of various European countries may have

<sup>1</sup> It would seem, therefore, that this race rather than *Homo Alpinus* is better entitled to the latter designation. The paradox arises from the fact that the data of anthropology — that newest of sciences — are outrunning the terminology, even that which has but lately come into use. The term *Alpinus* was adopted before the differentiation was made between these two races or sub-races. Deniker himself avoids the difficulty by calling one Cévenole and the other Dinaric, a terminology that is likely to prevail.

<sup>2</sup> Pp. 49 *et seq.*

been perpetuated through a half conscious recognition of these traits as characteristic of the upper castes.<sup>1</sup> Thus the peculiar facial form—broad at the temples, pointed toward the chin—characteristic alike of the broad-headed Basques of France and of the long headed Basques on the Spanish side of the Pyrennees, is held by our author to be the result of such a process of sexual selection operating among this secluded people.<sup>2</sup> Thus again, to take a still more striking example, the uniformity of the Jews in feature—a uniformity holding good in spite of great dissimilarity in the more fundamental but less obvious form of the head—is attributed to sexual selection as the result of race consciousness. The countenance of the Jews is, then, of their own making from generation to generation, and it has come to be characteristic of all Jews independently of their original racial affinities.<sup>3</sup>

This theory of the effect of conjugal selection upon the aspect of the members of a social group is a favorite one with our author, and he applies it frequently with great skill to throw light upon cases, such as those of the Jews and Basques, that would otherwise be difficult of explanation. An obvious difficulty with the theory is that it fails to explain the origin of the traits in question or how they come to be accepted among a given group of population as especially characteristic. It would seem, for example, that the Basques must have already acquired pretty generally their peculiar form of face before it would be recognized among them as a mark of distinction and an element in their ideal of sexual beauty. It appears, therefore, that the theory serves better to explain the perpetuation of certain physical characteristics in a given population, than their original acquirement and extension throughout the group.

Another obvious criticism is that Ripley drags in this hypothesis in some cases where it is hardly needed. One example of this may profitably be noted in some detail as it concerns a matter of considerable importance, and as it serves also to illustrate a weakness in logic which crops out occasionally in different parts of the work. After attributing

<sup>1</sup> Pp. 469-470.

<sup>2</sup> Pp. 200 *et seq.*

<sup>3</sup> Pp. 398 *et seq.*, p. 202.

Ripley shows from the varying head-form among the Jews that they are of mixed racial descent, that they are not indeed a race but only a people. This part of his theory has been anticipated by Lapouge, *Les Selections sociales*, Paris, 1896, pp. 136 *et seq.* Professor Ripley's argument has been criticised, not very conclusively, by Jacobs, ("Are Jews Jews?" *Popular Science Monthly*, August 1899).

the light pigmentation of the Teutonic race to its prolonged habitat in northern Europe, Ripley says :

Climate as an explanation for the derived blondness of the Teutonic race is not sufficient by itself to account for the phenomenon. Its blondness is something more than a direct product of the fogs of the German Ocean. *This is proved at once* by a significant fact, . . . viz., that blondness not only decreases as we proceed southward from Scandinavia, but in an easterly direction as well. In other words, the Russians at the latitude of Norway and Sweden are far more brunet in type than the Scandinavians. How shall we reconcile this with our environmental hypothesis? In the first place, the hordes speaking the Slavic languages are comparatively recent immigrants in that part of Europe. . . . For this reason comparisons between Scandinavia and the lands directly east of it are *vitiated at once*.<sup>1</sup>

This last is quite correct, and entirely disposes of the alleged proof against the competency of the environmental hypothesis of the blondness prevalent among the Teutons.

The work concludes with a very able chapter on the question of the possibility of the acclimatization of European races in the tropics. This is obviously a matter of the greatest social, economic, and political importance for overcrowded Europe. In most tropical countries, especially where dampness and lack of variety add to the insalubrity of the climate, it appears from a consideration of all the evidence that it is practically impossible for the north Europeans to perpetuate their race. The Alpine type appears to fare rather better, and the Mediterraneans naturally the best of all. Ripley might perhaps advantageously emphasize more than he does this racial aspect of the problem. *Homo Europaeus* has acquired his blondness and his lymphatic constitution by prolonged habitation in a cool, moist climate, free from the extremes of heat and the intense sunshine of the tropics. The Anglo-Saxons and the Germans may dominate the tropics but they cannot populate them. Perhaps the Italians, but much more probably the Chinese, will come to constitute the mass of population wherever the indigenous races are supplanted.

### III.

To return from the future to the past, I shall consider some of Ripley's theories of the origin and history of the different races of Europe. And first by the way of contrast I shall give a summary of

<sup>1</sup> Pp. 468, 469.

the prehistory and history of *Homo Europæus* as traced in the forthcoming monograph of Lapouge devoted to that race. I take this method of comparing the views of the two authors, because Lapouge's treatment of the matter is an argument instead of an exposition, and again because it concentrates attention upon the race which is of most interest from our present point of view, which is sociological rather than anthropological in the descriptive sense. If, that is, prehistoric anthropology supports Lapouge's thesis of the social dominance of *Homo Europæus* in many of the civilizations of the past, we have a commentary of great interest on the present predominance of that race as indicated in the data of anthropo-sociology.

The earliest history (or rather the earliest prehistory) of *Homo Europæus* may, according to Lapouge, be inferred from his racial physiology. This race, as I have intimated in another connection, is characterized first by its lymphatic constitution. Lymphatism is not indeed restricted to this race. It is found among various races in the case of individuals, or of isolated groups in marshy regions or under unhygienic conditions. But in all such cases it is accidental or exceptional. With *Homo Europæus* it is, on the contrary, an ethnic characteristic, the absence of which is exceptional. These tissues gorged with lymph are the immediate cause of the characteristic morphology and coloration of this race. The members are full and rounded, the muscles inflated, one might almost say padded, with tissues which soften the outlines of the figure; the skin, delicate, pliant, and but slightly protected by the epidermis, lets the color given by the abundant circulation appear on the surface.\*

*Homo Europæus* is, too, the only race of men which has under normal conditions, without cross breeding, and as an ethnic trait, blond hair and light eyes. The primates in general have rather dark eyes and hair, of various colors but rarely entirely black. Man also has in general dark eyes, and moreover his hair is always black except in the race *Europæus*, its crosses, and some exceptions of a pathological kind. The peculiar position of this race among the varieties of man and indeed among the primates as a whole can only be explained by the selective effect of a prolonged residence in a climate which would produce these peculiarities and in which they would be of benefit to the individual.

By this manner of reasoning, Lapouge proceeds by an elaborate study of the phenomena of pigmentation on the one hand, and of prehistoric geological and climatic conditions on the other hand, to prove that the home of *Europæus* must have been in the northwest of Europe, in the region now

\* The greater quantity of water with which the tissues of *Homo Europæus* are impregnated gives them a less specific gravity. See the researches of Mies communicated to the Twelfth International Medical Congress, Moscow, 1897.

partly covered by the North Sea, corresponding, that is, to the present principal habitat of that race.

Now in the sepultures of England and Scotland belonging to the commencement and middle of the neolithic period are found crania some of which have, according to Lapouge, the form and characteristics of *Homo Europaeus*, others of which resemble the Mediterranean *Homo Meridionalis*, and others of which are intermediate.

During the neolithic a great movement of migration apparently set in toward the southwest. To this movement Lapouge attributes the innumerable dolmens of France which correspond to the latter half of the neolithic and the beginning of the metal period. The distribution of the great mass of these dolmens follows what must have been a broad belt of migration reaching from Brittany to the Mediterranean between the Garonne on the south, and Picardy and the Rhone on the north and east. Moreover the archaeological study of the funeral furniture shows that the dolmens of the northern part of this area are the more ancient while those in the south of France are almost all on the confines of the bronze age and many indeed are to be included in it. The relative location of the dolmens indicates that the people whose remains they hold were skilled in navigation, advancing preferably along the course of the principal rivers; and exactly similar dolmens along the coasts of Portugal and Spain show that these people were capable of journeying upon the high seas and that they colonized the coast as far as Gibraltar. A prolongation of this migratory movement has left similar monuments in the Mediterranean islands, on some points of the Italian coast and in the region between Algiers and Egypt.

All these dolmens furnish anthropological types analogous to those of the neolithic sepultures of Great Britain, with, however, a larger proportion of crania of the type *meridionalis*, and also with a certain proportion belonging to local races. These migrants reached the frontiers of Egypt as early as four thousand years before our era, and they or their descendants are probably the blond peoples known to the Greeks as Libyans and to the Egyptians as Lebus or Tamahous.

To return to the main body of *Homo Europaeus*, it appears that this race had during the neolithic period expanded from its habitat in the northwest over much of central Europe. Toward the end of the neolithic and the commencement of the age of bronze, the encroachments of the sea put in movement new bodies of *Homo Europaeus*. It is at the end of this last invasion that Lapouge places the beginning of the Aryan civilization of central Europe. This civilization developed not among a homogeneous people but in an ethnic environment already very complex. The thesis of Lapouge is that *Homo Europaeus* was that dominant element among the Aryan peoples, the element to which the rise of the Aryan civilization is primarily to be attributed.

This conclusion is arrived at by an elaborate study of the crania of the period in connection with the methods of interment. *Homo Europæus* appears to be the only type that is found everywhere in the neolithic sepulchres. In certain regions it is found alone, in forms varying somewhat but often identical with those of the present population of the same locality. In other sections it is represented by individuals of practically pure race and also by cross-breeds in which the type is, however, clearly recognizable. Wherever brachycephalic crania are found in these neolithic burying places they appear to represent accessory or accidental elements in the population. Thus in Switzerland, where the material has been most carefully studied, the sepulchres contain scarcely any brachycephalic crania; and the brachycephalic remains of the lake dwellings, being simply skulls without the other bones, and having been in many cases worked, are thought to be trophies or fetishes made from the skulls of vanquished brachycephalics. In France the brachycephalics are usually represented in the sepulchres only by feminine subjects. Of the typical brachycephalic *Homo Contractus* there are only three or four masculine crania as against two dozen feminine ones. Of these masculine skulls all but one come from Thoran where they were found as the cortège of a dolichocephalic chief interred with his weapons.

Toward the end of the neolithic there appear in Belgium, England, Italy, Poland and southern Russia brachycephalics of various types who, Lapouge holds, were driven from the central region by the advance of *Homo Europæus* that we have just described. The more primitive form of *Homo Europæus* — the Finno-Ugrians — were at the same time crowded toward Russia, where their crania are found principally in the small dolmens and kurgans. These people penetrated into Asia by a route south of the Black Sea; the philologists regard the most ancient language of Babylonia, the Akkadian or Sumerian, as belonging to the Finno-Ugrian group and some ancient Chaldean crania bear out this hypothesis. The Guti of western Persia are described in texts as early as 2000 B. C. as blond, or at least as light (*namrutim*). The Amorites were probably of this race; the Egyptian monuments show them as blond, tall, dolichocephalic and with prominent aquiline noses; they interred their dead in dolmens of which there are over 700 in the country of Moab. The Finno-Ugrians made expeditions also into Siberia and central Asia; the Chinese historians and geographers describe tribes of these blonds as inhabiting most of the north of Asia where the Mongolian element dominates today.<sup>1</sup>

<sup>1</sup> The terrible Attila appears to have been of the Mongolian race, but otherwise the tribes which threw themselves at different times upon the civilization of Europe were governed by blonds. The great Genghis Khan, and Tamerlane were of the race *Europæus* and contemporary portraits describe them with the traits of the Germans and Scandinavians. Rubruquis compares Genghis Khan to a Norman gentleman, Jean de Beaumont.

Following these Finno-Ugrians the Aryans proper early penetrated into Asia. The Indo-Iranian branch separated from the main body after the use of metals had begun, and apparently settled for a long period in Russia before proceeding to the east. The arrival of the Hindus in India dates perhaps from about 1500 before our era, the probable date of the first considerable monuments of that region, the dolmens of European origin. Ujfalvy thinks that the dolicho-blond type was mostly eliminated from the Hindus by the time of their arrival. But the *Mahabharâta* describes the Pandavas as blond and tall, and the Brahmins still have a proportion of blonds, and, as shown by the statistics of Risley, are more closely related than the mass of the population to the type *Europæus* as regards stature, cephalic index and nasal index. The Persians of pure race appear to have been blonds. Thus the nobles figured on the sarcophagi described by Hamdy-Bey and Reinach have blond or chestnut hair and the physiognomy of the ancient Gauls or Germans. The Hittites were probably a mixture of brachycephalics and dolicho-blonds. The ancient historians speak of the domination in Asia for a long period prior to 1000 B. C. by Scythians, of whose physical traits nothing is known. The Scythians of southern Russia are represented in the texts as blonds and, by Hippocrates especially, as extremely lymphatic, and 75 per cent. of their skulls are purely of the type *Europæus*. Xenophon tells us that the Thracians represented their gods in their own image, giving them red hair and blue eyes, and Galien compares the Thracians to the Scythians and to the Gauls and Germans.

Toward the year 2000 B. C., successive waves of Aryans spread out from central Europe — the Medes, Persians, and Hindus toward Asia; the ancestors of the Italians toward Gaul, and those of the Hellenic people toward the Adriatic. These two last currents invaded Italy, the islands from Corsica to Cyprus, and the coasts of the Ægean. These bold navigators founded numerous states in the western basin of the Mediterranean, and even sought about the year 1320, to conquer the empire of the Pharaohs. The brilliant Mycenaean civilization followed that of these Ægeans, and then arose the civilization of Greece. The movements of these peoples from central Europe can be inferred from the fact that their monuments and instruments are of the type originating in central Europe. That this is not the result of simple interchange or trading is indicated by the absence during this period in central Europe, and even in Sardinia and Sicily, of oriental objects that might have been obtained in such exchange. Similarly the practice of cremation originated in central Europe at the end of the neolithic and reached the Ægean only at the classic period.<sup>1</sup> The "peoples of the sea" who made war against Egypt were naturally of

<sup>1</sup> It is a mistake to suppose that this practice originated in Asia. No people in Asia, Africa, or eastern Europe practiced it, so far as known, until a later period. In Asia it commenced in India, and only toward the fifth century B. C.



various races ; some of the tribes were decidedly of the type *Europaëus*. This race appears also among the crania of the Mycenians. Of the early population of Italy, the crania of the Umbrians show a mixture of *Homo Europaëus* and *Contractus*; those of the Etruscans show a preponderance of the former element, especially in the upper classes. Other series of Italian crania contemporaneous with the founding of Rome indicate the presence of *Homo Europaëus* and *Meridionalis*, the former being rather more numerous.

For the Greeks the crania that have been studied are comparatively few, but the indications as to pigmentation are abundant. The crania are dolichocephalic, with an index of about 75. As to pigmentation, the Greeks represent as blond the gods, the heroes, the great men, and the free citizens. The colors with which they painted their statues were often conventional or merely decorative, but it is perhaps significant that, with the exception of representations of slaves and strangers, the hair is almost always given a yellow or reddish tint. In Greek literature nearly all the gods are described as blond, as are practically all the heroes on the side of the Greeks. This description of the gods and heroes might conceivably be merely conventional, or the reflection of an ideal of beauty, rather than of the physical type of the actual population. The fact that living Greeks are usually described as blond is not open to this objection. There is some indication that the Thebans were dark-haired, but the Lacedemonians are expressly described as yellow-haired (ξανθοί).

For the Romans of the republic there are but few indications, partly owing to the practice of cremation and partly owing to the scarcity of personal descriptions in the literature. In the prehistoric or proto-historic series of crania described by Sergi, *Europaëus* appears to be the dominant element. Such proper names as Fulvius, Flavius, Rufus, and Ahenobarbus indicate blondness, but they may be in most cases merely traditional or patronymic names. There are few descriptions of individuals. Cato, according to an anonymous epigram, had red or reddish hair (Πυρρὸς) and grayish-blue eyes (γλαυκώματος). Of later representations of ancient families, Messalina was a brunette, and Poppaea and Nero were blond.

By the time of the empire the ancient families, and especially the patricians, were nearly extinct, in the biological sense, from the long series of wars, foreign and civil. The Romans of the empire were Romans by name but not by blood. The crania which have been studied for this period are probably not very representative ; *Homo Contractus* is the most frequent type in the center of Italy, *Homo Meridionalis* in the south, and *Homo Europaëus* toward the north. The authors of the period describe many personages, many as blond, many also as dark. Of the emperors, Constantine is depicted as dark and thickset, Valens as dark, and Valentinian as tall, light-haired and blue-eyed. The agitator, Valvomeres, was tall and red-haired, and the generals, Marcentius and Gentius, were blond.

The Gauls were tall, dolichocephalic blonds, with blue eyes. This is true of the Gauls of Italy, of Gaul, and of Great Britain, of the Carnutes, Ruthenes, and Brettones. The Celtae were as dolichocephalic as the Galatae. The same is of course true of the Germans, who were uniformly of the race *Europaeus*.

The ancient Slavs were also of this race, in spite of the brachycephaly of the modern population of Slavic countries. The study of the crania indicates that this brachycephaly is of recent date only, and that it is due to the prodigious increase of the brachycephalic elements among these populations. Thus, the skulls of the Slavic cemeteries in Germany described by Virchow, and the other crania of these western Slavs, are of the pure type *Europaeus*, with an index of about 75. A series of Slavic skulls of the region of Bohemia shows *Homo Europaeus* as the dominant type. In this region the cephalic index has varied about as follows; Stone age and age of bronze, 72.2; iron age, about 80; Slavic period, 78; the sixteenth century, 81.7; skulls from modern cemeteries, 83.3. In the region of Poland the Slavic element *Europaeus* was superposed upon an indigenous brachycephalic element. Thus at Slaboszewo, in the tombs of the eleventh century, the masculine crania are all of the type *Europaeus*, with an index of 74.3, while the feminine skulls are of a cross between that and some brachycephalic type. It is the same in the tombs at Zarnowka and Popow. The explanation must be that male immigrants of the dolicho-blond race married women indigenous to the region, who were interred with them. The Slavs of Russia were also largely dolichocephalic. Everywhere the percentage of brachycephalic skulls increases from the Slavic period to the present.

This phenomenon of the increase of the proportion of brachycephalics among the population is, moreover, general throughout nearly the whole of Europe, except Great Britain, and holds in nearly every region where the comparison has been made. Thus in southern Germany, in Bavaria, the proportion of brachycephalics increases from 14 per cent. among the Reihengräber to 32 per cent. among the crania of the tenth to the twelfth centuries, and to 83 per cent. among the skulls of the modern cemeteries; while the proportion of the strictly dolichocephalic crania falls from 42 per cent. to 32 per cent., and then to 1 per cent. Thus in France the indices of Aveyron, of Herault, of Tarn, of Tarn-et-Garonne, and of Gard have increased from the middle ages from 78 or 79 to anywhere from 82 to 86 according to locality. The index of crania of the cemeteries of Paris gradually rose through the middle ages, but has since remained relatively constant, probably because of the constant replenishment of the urban population by dolichocephalic migrants from various parts of France.

The documents and literature of the middle ages in general depict the higher classes as tall, slight, and blond.

Such in brief outline is what Lapouge holds to have been the part

played by *Homo Europæus* in prehistoric and historic times. I shall now suggest some points of similarity and of contrast between these theories and those of Professor Ripley, so far as the two come into contact.

In the first place Professor Ripley adopts a similar view of the origin of *Homo Europæus*, attributing his blondness and physical peculiarities largely to the climatic conditions of his habitat in the north of Europe.<sup>1</sup> I have already in another connection criticised Professor Ripley's argument that sexual selection also played a part in the acquirement of this blondness.

As against the view of Lapouge that *Homo Europæus* constituted an important element among the neolithic population of Great Britain and in the early migratory movement toward Africa, Professor Ripley regards these neolithic peoples as of the Mediterranean type, supporting this view partly by the argument of general probability and partly by reference to the dark pigmentation of certain present populations supposed to represent these ancient ones.<sup>2</sup> No doubt the populations in question were largely of the dark Mediterranean type, but there is nothing in this to refute Lapouge's claim that they contained also a proportion of blonds. Professor Ripley does not consider the positive evidence advanced in support of this last claim, nor does he consider the evidence from the resemblance of many of the crania to the form *Europæus*. Nor do I think that his argument as to stature<sup>3</sup> applies against Lapouge's hypothesis of the mixed race of these populations, since their stature was intermediate, or perhaps nearly equal to that of the ancient Teutons before these last had acquired the full height now characteristic of the race.

More important are the questions concerning the development of the Aryans proper, which, as we have seen, Lapouge holds to have occurred in central Europe among a people of whom the dominant type was *Homo Europæus*. Professor Ripley admits and, indeed, insists upon, the fact of the development in Europe during the stone age of an entirely indigenous culture marked by a great advance in the fashioning of implements, and by the construction of stone dolmens, etc.<sup>4</sup> Holding that the brachycephalics entered Europe from Asia, probably from Asia Minor,<sup>5</sup> he is inclined to discredit the theory which has attributed the introduction of bronze, cereals, settled agricul-

<sup>1</sup> Pp. 467 *et seq.*

<sup>2</sup> Pp. 466, 307.

<sup>4</sup> Pp. 488 *et seq.*

<sup>3</sup> Pp. 465-466, 174 *et seq.*, 306 *et seq.*

<sup>5</sup> P. 473.

ture, and the practice of cremating the dead, to these brachycephalics.<sup>1</sup> In both these matters his position is intermediate between the older theories of Mortillet and Topinard and the views that we have summarized from Lapouge. But Professor Ripley is still disposed to seek the origin of features of European cultures in other continents in cases where Lapouge would trace the relationship in the opposite direction.

One great difference between the point of view of Professor Ripley and that of Lapouge in connection with these problems of prehistoric anthropology is that the former seems generally to conceive of a given population as a unit and to ask what was *the* type prevalent among it, whereas the latter always asks first what were *the different types* present and which of them was characteristic of the leading classes. For this reason, perhaps, and also from the attention that he has given to the working of racial selection in recent and present populations, it appears perfectly natural to Lapouge that the dominant class of an ancient civilization should have wholly or largely disappeared among the modern people bearing the same name; whereas Professor Ripley is always disposed to find in the present population the image of the ancient. For this reason the two authors attach very different relative weight to contemporary records and remains on the one hand, and the evidence from the type of the present population on the other hand. The clearest and most interesting instance of this difference is in the treatment that Lapouge and Professor Ripley respectively give to the question of the physical type of the ancient Greeks. We have already summarized Lapouge's argument that, at least, the upper classes were dolicho-blonds of the race *Europæus*. By way of contrast I quote the gist of Professor Ripley's argument that the Greeks were of the race *Meridionalis*.

Their admiration for blondness in heroes and deities is well known . . . but to regard this as proof that the Greeks themselves were of this type is a broad interpretation which is scarcely justifiable. . . . Every characteristic in their modern descendants and every analogy with the neighboring populations, leads us to the conclusion that the classical Hellenes were distinctly of the Mediterranean racial type.

Unfortunately for this view, Bachylides describes not only the gods but also the Lacedæmonian women as golden haired, and Polemon, as quoted by Adamantius, uses the same adjective (ξανθός) in describing the Greek citizens as distinguished from the lower classes.

<sup>1</sup> Pp. 497-502.

Another point of difference is that Lapouge always attributes blondness among any people to a migration or infiltration of blond elements, ultimately from the north of Europe. Professor Ripley, on the other hand, sometimes attributes such blondness to local environmental influences. Thus he suggests that the blondness among the Libyans<sup>1</sup> and among the Amorites<sup>2</sup> may be due to their local habitat in mountainous regions. This seems somewhat improbable; and moreover it fails to account for the resemblances of the crania of these and other scattered peoples to the form *Europæus*.

This brings us to another point of difference, the attention given by Lapouge to the form and structure of the various crania considered. In considering prehistoric problems Professor Ripley's study of the crania seldom touches more than the cephalic index. This difference in method is seen for example in the arguments of the two authors which we have discussed above as to the neolithic population of Great Britain.

#### IV.

If I shall have to criticise somewhat unfavorably Professor Ripley's attitude toward the generalizations, or—if for the sake of brevity one may venture to call them such—the laws of anthropo-sociology, it is because of the form rather than the substance of his treatment of the subject. The casual reader of his chapter on "Environment *versus* Race" would gather that he had triumphantly refuted the theory of differences in ability and energy between *Homo Europæus* and the brachycephalic race and had pretty effectually disposed of the work of the anthropo-sociological school. But the careful reader of his chapter on "Urban Problems," especially in connection with his earlier paper on "Ethnic Influences in Vital Statistics,"<sup>3</sup> will see that Professor Ripley is himself an anthropo-sociologist, that he has been brought by the evidence accumulated by Ammon, Lapouge and their coworkers to accept about nine tenths of their generalizations, and that he even carries some of these further than they have ventured to do.

To discuss, or even to present, the concrete data upon which rest the generalizations of anthropo-sociology would be impossible within the limits of this review, but the reader will find a part of them in pre-

<sup>1</sup> Pp. 279-280.

<sup>2</sup> P. 77

<sup>3</sup> *Publications of the American Statistical Association*, 1896, vol. v. pp. 18-40.

vious articles in this JOURNAL.<sup>2</sup> It should be emphasized that the more important laws were discovered in the course of inquiries undertaken first with a purely descriptive purpose. In the early nineties, Ammon, in collecting data for the Anthropological Commission of Karlsruhe, discovered that everywhere in Baden the urban populations were more dolichocephalic than the rural inhabitants. This result was reached wholly independently of the similar investigations of Lapouge in southern France, which had already shown that the upper classes were in that region more dolichocephalic than the mass of the population. These results tallied with data which had been collected much earlier, but not fully analyzed, by Durand de Gros in Averron. In 1894, working over data collected by Lapouge, Fallot, and Collignon, I found not only that the urban population was more dolichocephalic than the rural, but that the migratory elements were more dolichocephalic than the sedentary populations from which they came. This last result was, indeed, already indicated by Lapouge's striking discovery that the children of parents born in different cantons of southern France were more dolichocephalic than the children of parents born in the same canton. At about the same time Collignon's study of urban and rural indices in the southwest of France, brought him into substantial agreement with the views of Lapouge and Ammon. From this time on similar inquiries multiplied in the hands of Wiesbach in Austria, Dietlein and Chalemeau in Switzerland, Ranke in Bavaria, Ammon in Baden, Lapouge and Muffang in France. The results have been almost uniformly in support of the theory that migration from the country to the cities and from the mountains to the rich plains draws more largely from the dolichocephalic than from the brachycephalic elements in the rural population. Only thus can we account for the fact that the population of the large cities in the terri-

<sup>2</sup> "Recent Progress of Social Anthropology," JOURNAL OF POLITICAL ECONOMY, 1896, vol. iv. No. 3; "Social Selection," *ibid.*, 1896, vol. iv. No. 4; "The Pedagogical Significance of the Cephalic Index," *ibid.*, 1898, vol. vi. No. 2; "Further Data of Anthro-Sociology," *ibid.*, 1899, vol. vii. No. 2; and especially "The Fundamental Laws of Anthro-Sociology," *ibid.*, 1897, vol. vi. No. 1.

Cf. also "Dissociation by Displacement: a Phase of Social Selection," *Quarterly Journal of Economics*, 1896, vol. x. No. 2; and *Revue internationale de Sociologie*, 1896, vol. iv. No. 7; "Ethnic Stratification and Displacement," *Quarterly Journal of Economics*, 1896, vol. xi. No. 1; "The Hierarchy of European Races," *American Journal of Sociology*, 1897, vol. iii. No. 3, and *Revue internationale de Sociologie*, 1898; "Die Auswanderung von Europa im Lichte der Social-Anthropologie," *Naturwissenschaftliche Wochenschrift*, 1899, vol. xiv. No. 19.

tory where these two races come into question is more dolichocephalic not only than that of the suburbs and the surrounding region, but also than that of the respective countries in which they are located.<sup>1</sup>

The dolichocephalics appear to be more migratory than the brachycephalics in a still larger sense. Not only are they more ready to seek their fortune in the cities, but they seem to have entered more largely into migration to foreign countries, at least wherever, as especially in the earlier days, such a change of residence required a considerable degree of courage, enterprise, and ambition. Thus the indications are that at least the earlier emigrants from Germany, France, and Switzerland to the United States were more largely composed of this type than the home populations. Such is the inference to be drawn from my measurements of such migrants and of their sons in California. The same conclusion appears to follow from Professor Ripley's statistics of the students of the Massachusetts Institute of Technology; for the average index of these students, whose ancestors in some proportion must have come from the brachycephalic part of Europe, is no higher than of English students as examined by Muffang.

Less extensive but hardly less uniform are the data that indicate the greater energy, enterprise, will-power, and originality of the dolichocephalic type as compared with the brachycephalic. The latter is perhaps fully as intelligent, and is probably superior in the acquirement of knowledge, especially of the sort that requires receptivity and power of memory,<sup>2</sup> but he possesses less often the power of initia-

<sup>1</sup> For this last reason the dolichocephaly of the cities cannot be explained to any extent on the hypothesis of Livi and (formerly) of Professor Ripley, that the cities in relatively brachycephalic regions are more dolichocephalic than the immediately surrounding region, because they draw partly from the country as a whole. For the Frenchmen in Paris are more dolichocephalic than those of any considerable part of France, and the same thing is true of the other large cities so far as examined. Moreover some of the data are, as I have noted above, in such form as to enable us to trace in detail the process of draining from the country toward the cities of the more dolichocephalic rural elements.

<sup>2</sup> This point has been frequently brought out by the anthropo-sociologists, and Muffang especially has shown that while the relatively dolichocephalic students succeed better in studies requiring initiative and reasoning power, the brachycephalics excel in branches demanding receptivity and power of memory (see JOURNAL OF POLITICAL ECONOMY, March 1898, pp. 263-265). The recently published data of Dr. Arthur MacDonald show that among American school children, there are more "bright" and fewer "dull" pupils among those whose cephalic indices (75 to 80) indicate the race type *Europæus* than among those whose indices (80 to 85) indicate descent from *Alpinus*.

tive characteristic of the pioneers of progress. This characterization of the two types is of course in part provisional, but in its main outlines it seems to be based upon adequate data. In a general way, it is found, by many examinations of living individuals and of crania, that the proportion of dolichocephalics increases at every step as the comparison mounts from the lower to the higher social categories, from the peasants to the urban population, from the proletariat to the working class proper, from the masses to the professional classes and to the nobility.

Up to this point Professor Ripley is in substantial agreement with the anthropo-sociologists, in that he accepts fully the laws of the greater mobility and the urban concentration of the dolichocephalics, and in large measure the law of their larger proportional representation in the upper social categories. In respect to urban concentration, he does, indeed, emphasize one anomaly, namely, that the city populations, although more dolichocephalic, are nevertheless usually darker than the country people. This is, I think, the most valuable part of Professor Ripley's whole criticism, and I give in a footnote the gist of his explanation of the phenomenon in question, together with the explanation suggested by Lapouge—the two being complementary rather than antagonistic.<sup>1</sup>

or *Dinaricus*. The extremely dolichocephalic type (perhaps partly of Mediterranean race) seems to succeed well among the girls but very poorly among the boys, for whom the data are more extensive. This last appears to support the theory frequently brought forward by Lapouge, that indices below 74 indicate often a lack of mentality (see *Les sélections sociales*, Paris, 1896, p. 79). Because of a difference in terminology, the conclusion of MacDonald may seem to the careless reader of his summary to controvert those of the anthropo-sociologists, but in reality his data are in complete harmony with ours, and constitute a welcome addition to the material of the science of anthropo-sociology. I explain their significance more fully in a paper that will shortly appear in the *Naturwissenschaftliche Wochenschrift*.

<sup>1</sup> PROFESSOR RIPLEY says: "It is not improbable that there is in brunetness, in the dark hair and eye, some indication of vital superiority. . . . If in the same community [and within the same race] there were a slight vital advantage in brunetness, we should expect to find that type slowly aggregating in the cities. . . . Selection thus would be doubly operative. It would determine both the character of the urban immigrants and, to coin a phrase, of the urban *persistants* as well" (p. 557).

If it is allowable to add the words "within the same (*i. e.*, the dolicho-blond) race," as I have done above in brackets, Professor Ripley's explanation becomes closely analogous to that of Lapouge, which is as follows:

"Urban populations, more dolichocephalic than the rural populations from which they are recruited, are yet in general less blond, instead of more blond, as we should



If, however, the mass of the urbans tend rather to brunetness, the upper classes and especially the nobility all over Europe appear to be still, as in the past, not only dolichocephalic, but in a marked degree tall and blond. In this matter Professor Ripley is in full accord with Ammon and Lapouge. One might cite a dozen passages in which he is more emphatic on this point than most of us would venture to be. Thus he speaks of "the racial Teutonism of the upper classes all over Europe" as "definitely established"<sup>1</sup> and affirms that :

expect. This may perhaps be explained on the hypothesis that the blondness characteristic of *Homo Europaeus* may tend under certain conditions to disappear from natural causes.

"If, that is, depigmentation is, as we have argued, a semi-pathological phenomenon, a relatively new characteristic with man, acquired under the peculiar climatic condition of the habitat of *Homo Europaeus*, it is comprehensible that the trait in question may in a sense be cured, or that it may yield either to the influence of atavism, or to a new tendency to variation toward the dark pigmentation originally universal. I am disposed to think that the individuals of more or less dark coloration but otherwise possessing all the characteristics physical and psychological of *Europaeus*, may be examples of *Europaeus* cured of his depigmentation, or of a darker variety of that race in process of formation. This is, of course, only a hypothesis, but it at any rate helps to explain certain facts of a very obscure etiology.

"It is well understood among biologists that pigmentation is a protection to the individual. This appears very clearly in the increase of pigmentation from childhood to maturity among all peoples who have a strain of the blood *Europaeus*. The children of such peoples are usually born more or less blond, and become progressively darker. This increasing nigrescence is often referred to the influence of brunet ancestors. But if this were the cause, it ought to work also in the opposite direction, and the more brunet children ought to bleach out toward maturity from the influence of the blonds among their ancestors. The real cause is evidently an adaptation of the child to environment ; the influences that originally produced blondness among the race *Europaeus* have ceased to act, and the organism tends to readjust itself, to return to the dark pigmentation originally normal and better adapted also to present condition.

"Moreover, experimental zoölogy shows that under new or abnormal conditions there are produced experimental varieties of animals and plants, some novel and some with a tendency toward atavism. . . . Why, then, may not the influence of the absolutely abnormal life of the urban, and especially of the intellectual classes, produce effects of the same sort, not only upon the embryo, but upon the living individual, young or even adult ? At any rate, the hair of the urban-born, according to statistics still however somewhat ambiguous, appears, other conditions being equal, to darken more rapidly and in a larger proportion of cases than that of the rural born " (*P. Aryan*, pp. 39-42).

<sup>1</sup> P. 455.

The upper classes in France, Germany, Austria, and the British Isles are distinctly lighter in hair and eyes than the peasantry. . . . Both tall stature and blondness constitute insignia of noble descent. Since the time of the Eddas, the servile ones have been described as short brunets.<sup>1</sup>

As regards the mobility of *Homo Europæus*, he says :

The contrast of this type whose *energy* has carried it all over Europe with the persistently sedentary Alpine race is very marked. A certain *passivity* or patience is characteristic of the Alpine peasantry . . . from Spain to Russia.<sup>2</sup>

It is significant, too, that he regards as blond<sup>3</sup> the French Huguenots, a stock which has been pre-eminently rich in pioneers of progress.<sup>4</sup>

With all these points of agreement, it seems doubly strange that Professor Ripley should apparently scorn the idea that race has very much to do with the progress of the different parts of Europe. Still, the chapter on "Environment *versus* Race" lays all the emphasis on the first of these factors, and most differences in social phenomena are held to be the necessary outcome, not so much of racial proclivities as of the geographical conditions. Of course, ultimately we agree that environment fashions the race through a selective process, but, once formed, the racial character is persistent, as is shown by the continuance of racial lines in the ever re-forming of strata of social categories. For the rest, it is not so much a matter of "race *versus* environment" as it is of race taking advantage of environment ; for, given a sufficient time, the more active and ambitious elements will concentrate in the most favorable environment. It is this that gives social significance to the concentration of *Homo Europæus* in the rich plains, and especially in the cities and the upper social categories.

In attempting to refute the social significance of race, Professor Ripley has no difficulty in picking flaws in the theories of Morselli and Bertillon, that the rate of suicide and the rate of divorce are higher wherever the dolichocephalic-blond enters largely into the population. He shows that, whereas the correlation holds good in France, it seems to fail in Germany, where the rate of suicide is highest in Saxony despite its comparative brachycephaly. I have no call to defend the theories of these writers, whose ideas do, indeed,

<sup>1</sup> P. 469.

<sup>2</sup> P. 601.

<sup>3</sup> P. 33. There are indications that they were also dolichocephalic.

<sup>4</sup> The scientific eminence of the Swiss is largely due to the descendants of these exiled families.

bear a superficial resemblance to those of the anthropo-sociological school, but whose method of proof is fundamentally different and certainly very faulty. Still I fancy their view is, after all, in general, not so far astray as Ripley seems to think. Although Saxony, compared crudely with north Germany, does apparently refute the alleged correlation, it seems probable that a comparison between the dolichocephalic and the brachycephalic regions of south Germany in greater detail would tend to re-establish the theory of Morselli that racial tendencies have a considerable bearing upon the rate of suicide.<sup>1</sup>

Something the same answer may be given to Professor Ripley's implied criticism of Lapouge's theory, that the wealth and industry of different communities are in correlation with the proportion of dolichocephalics among them. That generalization is indeed open to attack, for whereas the other laws of anthropo-sociology rest upon the study of individuals in the different categories, this particular one is reached primarily by a comparison of areas populated by one or the other of the races in question. The method is, then, a little in the nature of Morselli's, but Lapouge's generalization has an indirect support, which Morselli's lacks, from the other laws which rest upon the surer basis of concrete data as to different social categories. If the proof of this generalization, is, however, open to some criticism on the ground of inconclusiveness, Professor Ripley's refutation is still more open to this objection, for he presents no exact data at all, but merely hints that brachycephalic Saxony is after all—judged by the criterion of a high rate of suicide!—more civilized than the dolichocephalic parts of Germany. It would be more to the point to show—what is probably the case—that Saxony is the most developed, from an industrial point of view, of the German states. But this again would be no adequate refutation of the theory, for apart from the possibility that Saxony might be an exception to what is otherwise apparently a pretty general rule, it might still be true that Saxon industry owes its development to dolichocephalic entrepreneurs or inventors, combined with an intelligent and laborious working class, which is certainly content with a very small remuneration. Moreover, apart from this wholesale comparison of Saxony with the north, the

<sup>1</sup> By the way, Ripley's position in this matter was most excellently anticipated about the middle of the present century by A. Brierre de Boismont in his chapter on "The Relations of Suicide with Civilization" (in his *Du suicide et de la folie suicide*, Paris, second edition, 1865).

correlation between the cephalic index and the distribution of wealth apparently holds good in Germany and Switzerland, as in France, for the rich open valleys, and especially the cities, which are the centers of wealth and industry, are also characterized by the disproportionate abundance of *Homo Europæus* in their population.\*

Professor Ripley also argues that the correlation which Lapouge has shown between the comparative number of great men and the presence of the element *Europæus* on the population is due only to the fact that this race is located in the parts of Europe where the cities, and therefore the facilities for culture, are most abundant. The most obvious answer is that it is not merely accidental that this race is concentrated in the areas and centers where the opportunities of life are the richest. This localization of race is rather the result of a long process of selection, to some extent military, but still more industrial and social. But more than this, the striking fact is that the great men of Europe, and especially the great pioneers of progress, have come, in an altogether disproportionate degree from those very social categories of which *Homo Europæus* constitutes the largest element, from the professional classes, and especially from the nobility. DeCandolle has proved this conclusively, and more recently Odin has confirmed it in the greatest detail for France. Not only this, but Lapouge has shown from a study of the portraits of the greatest men of France, that they were overwhelmingly of the race *Europæus*. Odin, whose work is valuable for our purpose, for the very reason that as he had no knowledge of anthropo-sociology, his results are from this point of view wholly impartial, selects some thirty-eight authors as unquestionably in the highest category. Eighteen of these names appear also on Lapouge's list of portraits studied, and of these eighteen portraits sixteen show the type *Europæus*, and two the type *Alpinus*. Mindful of Professor Ripley's argument which begins, "Well, then, turn to Germany" (although I think this bad anthropological advice, because the cephalic index of the different parts of Germany is not known in the same detail as for France), I have begun a study of the birth-place of several hundred of the leading German savants, scientists, inventors, etc., of the last two centuries. The preliminary result is

\* For further criticism see this JOURNAL, vol. viii. No. 2, pp. 239 *et seq.*

\* That is, to find a refutation of such correlations between cephalic index on the one hand, and on the other hand wealth, culture, and abundance of ability. Pp. 527 *et seq.*

not to refute but to confirm the correlation between dolicocephaly and the frequency of high ability, and especially of originality. As elsewhere, the results are the most striking if one takes a select list of only the foremost pioneers. Most conclusive of all is the list of great scientists. Of these I have found the birthplace of twenty-two taken from the list of the great leaders of science, published in a historical work, wholly impartial, of course, as regards our present subject. Of these one was born in a decidedly brachycephalic region ; one, or possibly two, in regions moderately brachycephalic ; four in intermediate or uncertain territory ; seven in dolichocephalic, and eight in decidedly dolichocephalic parts of Germany.

CARLOS C. CLOSSON.

LOS ANGELES.

## NOTES.

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IN Europe a public career has long been open to economists. The finance ministers of the continent have been frequently selected from the rank of professional economists. In the United States, on the other hand, it has long been the fashion of the man of affairs to regard the academic man as unfit for the practical duties of office. Such a state of things could not, in nature, continue forever; and there are many interesting evidences of an increasing respect for the opinions and judgment of trained economists.

Some time ago David A. Wells and Francis A. Walker made great reputations in the service of the government. More recently several cases illustrate the value set upon economic training: Professor A. T. Hadley's appointment some years ago as Commissioner of Labor in Connecticut; Professor H. C. Adams's continued service as the statistician of the Interstate Commerce Commission; the exceptional collection of prices by Professor R. P. Falkner, for the Aldrich Senate Committee; the conspicuous efficiency of Professor F. W. Taussig on the Massachusetts Commission on Taxation; the consultation of Governor Roosevelt with Professor E. R. A. Seligman on legislation relating to taxation; the selection of Professor Emory R. Johnson, of the University of Pennsylvania, upon the Isthmian Canal Commission; the present work of Professor J. W. Jenks, on Trusts, for the Industrial Commission authorized by Congress; and the choice of Professor Walter F. Wilcox, of Cornell, as the chief statistician of the new national census.

THE rise in the rate of discount, and the exceptionally high rates charged on speculative operations during the last few weeks have an interest beyond the temporary effect on business and stock transactions. The causes lying behind the facts are very significant as to our monetary situation. In the first place, the rigidity of the currency is brought clearly to view, whenever the conditions of foreign exchange (such as are produced, among other things, by the Transvaal war) prevent the easy flow of gold to this country on the rise in the rate of interest. The unmistakable prosperity of the country has taken up a

large part of the stock of paper money for uses as a medium of exchange, and the inelasticity of bank issues has become painfully apparent. For this the self-evident remedy—to which the country must come in time—is a more elastic bank-currency based on commercial assets. The existing situation throws up this need in a very practical manner. In the second place, another factor has just reappeared to work more or less damage. Not until very recently has the United States been blessed with a surplus. The heavy taxes imposed during the Spanish war now unite with former sources in yielding an income greater than the outlay (even while the Philippine war continues). This flow of money into the treasury brings forth again the malignant influence of the old Independent Treasury system upon the money market. Although keeping as large deposits as seem politically defensible with the banks, the secretary finds his surplus increasing. Just to the extent that this goes on, it drains the resources of the banks at the very time when great legitimate demands are made upon them by the development of industry. The crudeness of our monetary system is sure to be brought to light whenever an emergency arises. The prepayment of bonds which has been offered by the Secretary of the Treasury is a necessity arising from the Independent Treasury System, and deserves none of the criticism which a captious press has given it.

THE evident purpose of the party in power to pass a currency measure at this session of Congress gives the bills presented in the house and senate exceptional interest. That of the house is remarkable in many respects; it is admirably clear, comprehensive and adroit. Indeed, in importance no legislation since the Civil War is at all comparable with it. In essentials it follows very closely the plan of the Indianapolis Monetary Commission in regard to metallic currency, while dealing sparingly with banking. (1) The bold declaration that 25.8 grains standard gold shall constitute the monetary unit will remove all uncertainty as to the coins in which private contracts are to be paid; and all government obligations are made specifically payable in gold. But this is not so satisfactory as it might be, in view of the retention of the present legal-tender qualities of the silver and paper now in existence. These disadvantages are, however, counterbalanced by other provisions. (2) Of these the most far reaching is the separation of the monetary and fiscal operations of the treasury. No other one thing will do more to clarify the public mind as to the forces acting on our

currency, and at the same time protect our standard of prices. This is accomplished by the creation of a Division of Issue and Redemption, which will entirely destroy the pernicious operation of the Act of May 31, 1878, which allowed United States notes to be reissued after being redeemed. (3) The authorization of direct redemption of the token silver dollar secures this kind of money from any possible depreciation, so long as the treasury has gold in the Bureau of Issue and Redemption. (4) To secure the means, the secretary is given power to sell bonds. Nothing in the whole bill is of more practical value. And in this connection (with an eye on increased facility of bank issues) the refunding of the bonded debt has been proposed, especially in the senate bill. (5) The silver certificates are reduced in denominations below ten dollars. In that case, little silver is likely to come in for redemption in gold. And yet, while little is said about silver in the bills, the whole danger from the silver currency is practically removed. If the essentials in the above mentioned points finally emerge in the law which will result from the conference of house and senate, the business public may well breathe a sigh of relief, and the constituency of the Indianapolis Monetary Convention may proudly claim a great victory.

As to banking, the measures proposed are inadequate and will produce little improvement. The increase of the limit of issue from 90 to 100 per cent., together with a newly refunded bond at  $2\frac{1}{2}$  per cent. selling about par, will somewhat help those banks which issue notes. The removal of the tax from circulation will also work to the same end. The imposition of a tax on capital and surplus, however, meets with opposition from large banks, as well it might. These are exactly the institutions of the great financial centers, which issue no notes (to speak of) and which consequently pay no tax under the existing law. The country banks, on the other hand, which could not do business without notes have had to pay the tax in the past. By the new proposals, the country banks will be relieved at the expense of the large city banks, which is as it should be. This proposal ought to bring support to the measure from the South and West. But once the fundamentals of our currency have been settled, we may hopefully turn in the future to measures better suited to adapt our banking system to the needs of industry and trade.



SAUERBECK's general index numbers for recent months show an increase of prices for extractive products and raw materials (foodstuffs not having recently changed) :

April 1899	-	-	65.6	September 1899	-	-	68.3
July "	-	-	66.9	October "	-	-	70.0
August "	-	-	67.6	November "	-	-	71.5

As compared with 63.8 in December 1898 and the low point of 59.2 in July 1896 there is a marked upward movement. The average in past years was :

1883	-	-	-	82	1895	-	-	-	62
1889	-	-	-	72	1896	-	-	-	61
1893	-	-	-	68	1897	-	-	-	62
1894	-	-	-	63	1898	-	-	-	64

This rising tendency is confirmed by the London *Economist's* index number (in which cotton has again had a large influence) :

December 1895	-	-	1999	March 1899	-	-	1973
" 1896	-	-	1946	June "	-	-	2028
" 1897	-	-	1890	August "	-	-	2035
" 1898	-	-	1918	September "	-	-	2085

At the end of October 1899 the index number had risen to 2128, or almost the initial point of 2200, which represents the average prices of 1845-1850.

ALTHOUGH the Statistical Report of the Interstate Commerce Commission for 1898, which has just come to hand, does not bring the returns within sixteen months of the present time, it does show a recovery by the roads of all that was lost during the years of depression. Gross earnings for the year ending June 30, 1898, were \$1,247,325,621 as against \$1,220,751,874 in 1893, the highest amount received in any year prior to 1898. This is a gain of 150 million dollars from the low water mark of 1894 or 1895. The report which we receive this time next year will show that this gain was more than doubled for the year ending June 30, 1899, and the monthly reports from roads in all sections of the United States show that great as the gains were last year, the high returns are being surpassed this year. The net income for 1898 shows a percentage of gain even greater than the gross earnings. Indeed the net income for 1898 is 85 million dollars above the low water mark of 1894,

or more than two and one half times as much as was available for dividends in 1894 or 1895. And yet the dividends actually paid in 1898 are 5.4 million dollars less than in 1894. But the dividend payments of 1894 left a deficit of nearly 46 million dollars while in 1898 there remained a surplus after dividends were paid of 44 million dollars. Although the gross and net earnings of the roads were greater in 1898 than ever before, there are only three years since 1890 when the stockholders have not received greater dividends. From 1890 to 1894 dividends were always above 100 million dollars, but in those years the surplus never exceeded 15 million dollars after dividends were paid, and in the years 1894, 1895, and 1897 there were heavy deficits. The surplus of 1898 looks as if the roads were being managed on a more conservative basis. The managers seem to have profited by the experience of the lean years and are laying up a surplus which will enable them to weather the next storm without taking refuge in the receiver's court.

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The period of depression seems also to have taught lessons of economy and better methods of operation, for the increased earnings have been secured in spite of a steady decline in both freight and passenger rates. Increased traffic due to greater business activity is, of course, the most important factor in explaining the addition to gross earnings, but if operating expenses had not been materially reduced the net income showing would have been much less favorable. Freight rates have declined 20 per cent. since 1890, and yet the percentage of operating expenses is less in 1898 than in any previous year. In the face of all this decline, and while the railways are making a good profit in carrying freight at three fourths of a cent per ton per mile, a leading railway official declares before the Industrial Commission that there is still more waste in the railway business than in any other important industry. What will the rates be when consolidation or better organization eliminates the remaining items of waste ?

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### STREET RAILWAYS AND THE PUBLIC.<sup>1</sup>

THE paper presented by Mr. Yerkes at the recent meeting of the American Street Railway Association, and the discussion thereon,

<sup>1</sup>See paper by CHARLES. T. YERKES, "Investments in Street Railways; how can they be made secure and remunerative." *Eighteenth Annual Report of the American Street Railway Association*, pp. 49-55.

although not searching, present some indication of the point of view occupied by the street railway owner toward the public. Street railway securities are of general demand only since the eighties. The consolidation of street car lines brought the securities before the public as good investments. As late as the seventies the banks had hesitated to accept these securities as good collateral. This increase in importance of the interest represented by the securities brings up the question of the relationship borne by the companies to the investor and to the municipality. Mr. Yerkes and those who participated in the discussion were of the opinion that publicity was essential to protect the investor. The municipality should receive, as a *quid pro quo*, a share in the receipts of the street railroad.

The great investment of capital is cited as an argument in favor of two-hundred-year franchises. It is claimed that a proper return upon the investment cannot be obtained in a short period. Street railroad enterprise is subject to much unjust criticism. There should, therefore, be a commission of three business men appointed by the governor of the state for a term of fifteen years. This commission should concern itself with the general supervision of street railways, and the affording of the protection to which railways are legally entitled. This plan gives no control over fares. The commission's functions are to be, on the whole, advisory.

Throughout the paper and the discussion thereon, the point kept in view is that of the self interest of the street car lines. It is significant, however, that there is also a recognition of the fact that street railway enterprise is so bound up with civic needs that regulation is warranted.

S. J. McLEAN.

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## AN ERROR IN THE USE OF STATISTICS OF POPULATION.

In his latest contribution to economic literature<sup>1</sup> Mr. Wright presents statistics of the United States census, from which he concludes that there has been nearly a year's increase in the average duration of human life during the decade 1881-1890. At the same time he finds a large decrease in the number of child workers. According to the census the average age of our people was 24.13 years in 1880 and

<sup>1</sup> *Outlines of Practical Sociology*. New York: Longmans, Green & Co., 1899. 8vo, pp. xxv + 431.

25.11 years in 1890, an apparent increase in average age of nearly one year. Regarding this increase Mr. Wright remarks:

A comparison with the earlier decades would show that this rise of average age of the living population has long been going on. Just what the increase has been in a century cannot be stated, but the rise in the reasonable expectation of human life is one of the triumphs of modern sanitary and medical science.

Mr. Wright also presents the following table, from which he concludes, notwithstanding the incomparability of the data, that there has been a decided decrease of children in gainful occupations:

NUMBER AND PERCENTAGE OF CHILDREN AT WORK AT THE THREE  
CENSUS YEARS 1870, 1880, AND 1890.

Census years and classification of ages	Males	Females	Total
1870			
Total children 10 to 15 years, inclusive - -	2,840,200	2,764,169	5,604,369
Number of above at work - - - -	548,064	191,100	739,164
Percentage of above at work - - - -	19.30	6.91	13.19
1880			
Total children 10 to 15 years, inclusive - -	3,376,114	3,273,369	6,649,483
Number of above at work - - - -	825,187	293,169	1,118,356
Percentage of above at work - - - -	24.44	8.96	16.82
1890			
Total children 10 to 14 years, inclusive - -	3,574,787	3,458,722	7,033,509
Number of above at work - - - -	400,586	202,427	603,013
Percentage of above at work - - - -	11.21	5.85	8.57

To render the data of 1890 comparable with those of previous decades Mr. Wright estimates that 257,773 should be added, making the number of children from 10 to 15 at work in 1890, 860,786. I venture the suggestion that Mr. Wright has been incautious in his conclusions on these points, and to call attention to factors in the problem which he has failed to consider. The first of these is the fact that at the census of 1890 the question asked by enumerators of population, as appears by the census schedule, was "age nearest birthday," while the schedule of 1880 called for "age last birthday." Thus one-half year of the apparent increase in the average age of our people is fictitious. But admitting a half year's increase in average age, does this prove increased longevity?

The census shows a decreased proportion of children. This would increase the average age of the whole people, even without an increase in the average length of life. Children of fourteen and under constitute over 35 per cent. of our population. Should an epidemic of diphtheria or other disease carry off a large proportion of this class, the average age of the people remaining would be very considerably increased and the increase would not be the result of increased duration of life, but the contrary. A decreased proportion of children to the total population, from whatever cause, would in like manner affect the average age of our people. The proportion has been very sensibly affected by the unprecedented immigration during the decade in question, for of our foreign-born population children form an insignificant proportion, as remarked in the census (*Compendium*, p. 191): "Of all the foreign whites in 1890 less than one tenth were under fifteen years of age." As to the increase of our foreign population Mr. Wright remarks (p. 48):

During the decade from 1881 to 1890 the immigration was unparalleled in amount, reaching a total of nearly 5,250,000, almost twice as great as during the preceding decade and more than twice as great as during any other ten-year period in the country's history. More than one third of the total immigration of this country since 1821 came during the ten years from 1881 to 1890.

While our foreign-born population increased 38 per cent. during this decade, the population of native birth increased less than 23 per cent. Of our foreign-born population children under five constituted less than 1 per cent. and under ten less than  $4\frac{1}{2}$  per cent. While of the total population children under five constituted over 12 per cent. and children under ten constituted over 24 per cent. While children classified as under five constituted 13.79 per cent. of the total population in 1880, in 1890 they were but 12.19 per cent. Though our total population increased during the decade over 25 per cent., the increase of those under five years was but from 6,914,576 to 7,634,693 or less than  $10\frac{1}{2}$  per cent. Had this class increased in proportion to the increase of the total population, there would be shown above a million more children of this class than the census figures indicate. As one of the causes for the decrease, the census, in remarks accompanying the tables, mentions the decline among native white persons of native extraction as due to the disinclination of native-born mothers of the present generation to rear large families. The effect of this

seems, however, to have been counteracted by the prolificness of mothers of foreign extraction.

After allowing for the effect of foreign immigration, and for every other cause affecting the decline of children, there remains a large number that must be accounted for by a cause that seems not to have occurred to the census officials. This is the change in the census question, referred to above, from "age last birthday" to "age nearest birthday." This makes practically one half year's difference in the age schedule, for at the census of 1880 all children up to their sixth birthday would be included as five years of age, while at the last census those up to  $5\frac{1}{2}$  only would be included. While the data cited by Mr. Wright, therefore, may be held to show an increase of nearly a half year in the average age of our people, this increase in average age does not seem to indicate increased longevity.

The change in the census classification of child workers from 10 to 15 at previous censuses to 10 to 14 at the last census is not explained. This change destroys not only the comparability of the data with those of previous censuses, but it makes any comparison with the data of the manufacturing census or with those of state factory inspectors impossible. There certainly is every reason why the comparability of the data should have been maintained, and no good reason has been given for the change. Whatever may have been the aim, the result is to conceal the facts as to whether there has been an increase or decrease in the number of children in gainful pursuits. The change from 10 to 15 to 10 to 14 makes an apparent change in the classification of one year, but since at one census the age was taken at last birthday, and at the other at nearest birthday, there is in fact a change in classification of practically a year and a half. At the census of 1880 those reported as from 10 to 15 years inclusive really included all child workers up to their sixteenth birthday, while at the last census the number included all up to  $14\frac{1}{2}$  years of age.

Mr. Wright has guessed that there should be added to the number reported in 1890, 257,773, or slightly over 40 per cent., to make a number comparable with the number reported in 1880. He has apparently no more ground for this than for his conclusion that there was, from 1880 to 1890 an increase of nearly a year in the average duration of life.

From the figures given in Mr. Wright's table there appears a very striking increase of child workers from 1870 to 1880, while his estimate

shows a still more striking decrease from 1880 to 1890. The Massachusetts factory inspector reports separately the number of children employed in the factories of that state, from 14 to 16 and those under 14. Of the 9919 employed in 1890, 8263 were from 14 to 16, and but 1656 were under 14. This is a proportion of 5 to 1. In 1891 the proportion shown is 6.6 to 1. If we accept this proportion as at all representative, we have the following problem. If child workers from 14 to 16 outnumber child workers under 14 as 5 or 6 to 1, what proportion would child workers from 14½ to 16 be to those under 14½? If we conclude that the number of the older children are no more than double those under 14½, we should have to add 200, instead of 40 per cent., to the number 603,013, making the total number, in 1890, over 1.8 million, instead of 860,786, as Mr. Wright surmises. This is also but a guess, but it agrees with observation, and also with the recent investigation of the Department of Labor as to the employment of children. It is curious to note that Mr. Wright, in discussing the child-labor problem, makes no reference to this investigation of his own department. This calls to mind that in that report Mr. Wright quoted these same dubious census statistics to discredit the results of the investigation of the Department of Labor, which, if it may be accepted as showing anything whatever, indicates a very decided increase in the employment of children.

H. L. BLISS.

CHICAGO.

### THE APPLICATION OF THE ANTI-TRUST LAW.

I TAKE the liberty of calling attention to an error in Mr. Robinson's paper on "Organized Labor and Organized Capital" in this JOURNAL for June 1899. He says (p. 338) of the Sherman anti-trust act:

So broad are the terms of the act just quoted that it has often been pointed out that they would in fact, if strictly interpreted, operate to forbid labor organization. But no attempt has been made to prove that point—for the simple reason that it is assured in advance that, if it was found that the law did forbid such combinations, Congress would promptly amend it.

There seems to be in the writer's mind the impression which Mr. F. J. Stimson expresses in his *Labor in its Relations to Law*, and which ex-Senator Manderson expressed in his recent address before the American Bar Association, that the law has gone very far toward making the industrial classes privileged. General Manderson was a member of the

Senate when the anti-trust act of 1890 was passed, but he must have forgotten the debates on the bill and Judge Billings's application of it to strikers, for in his address before the Bar Association he remarked on the absence of legislation in restraint of combinations of labor, when there is so much legislation, or popular demand for legislation, in restraint of combinations of capital.

The debates on the anti-trust law will show, that in the shape in which the bill was reported back from the committee to the Senate, it was as applicable to combinations of labor as to those of capital. Senators Teller and George pointed this out as an objection, and my recollection is that Senator Edmunds recognized it as one of the merits of the bill. Judge Billings applied the law to a labor combination, and said that the congressional debates showed that that was its purpose. In November 1892 there was a strike in New Orleans growing out of difficulties between the warehouse men and the draymen and their employees. The labor organizations were trying to force their recognition. An application was made before Judge Billings of the United States district court to enjoin the unions on the ground that they were combinations in restraint of trade. His decision was rendered March 25, 1893, and is to be found in United States against the Workmen's Amalgamated Council of New Orleans, 54 Federal Reporter 995 :

The bill of complaint in this case is filed by the United States under the Act of Congress entitled "An act to protect trade and commerce against unlawful restraint and monopolies." (26 *Statutes at Large* 209). . . . I think the congressional debates show that the statute had its origin in the evils of massed capital, but, when Congress came to formulating the prohibition which is the yardstick for measuring the complainant's right to the injunction, it expressed it in these words : "Every contract or combination in the form of a trust, or otherwise, in restraint of trade or commerce among the several states or with foreign nations is hereby declared to be illegal." The subject had so broadened in the minds of the legislators that the source of the evil was not regarded as material, and the evil in its entirety is dealt with. They made the interdiction include combinations of labor as well as of capital.

And the injunction was granted although the strike had long before been settled.

If it were a fact that there are fewer restrictions upon combinations of labor than upon combinations of capital, it would be sufficiently explained by the fact that most of the ways whereby a labor union can



make itself effective are already illegal. But it is a mistake to suppose there are any serious restraints upon combinations of capital. A joint stock company is a combination of capital, and the law offers the capitalists a limitation of their liability as an inducement to combine. While the trust, technically speaking, has been held to be unlawful, there is practically no limitation upon combination by absorption. I am far from saying that there ought to be; I am not greatly alarmed at the present manifestation of the tendency to combine; but it is absurd to represent that the law is discriminating in favor of labor and against capital when the United States courts applied the anti-trust law of 1890 to a labor union in New Orleans and were unable to make it fit the Sugar Trust in the Philadelphia case.

Massachusetts created a telephone company to do business in every state except the one that created it; Delaware created a gas corporation to do business in Boston in defiance of Massachusetts law. New Jersey and Delaware are now in hot competition for the profits of creating corporations to do business in other states, chiefly New York. The Federal courts have broken down some of the means whereby states have attempted to protect themselves from foreign corporations. This year will long remain notable for the number of trusts, so-called, created in it. It is a strange time to complain of the restrictions upon combinations of capital.

Most of the agencies whereby a labor union can make itself effective are illegal at common law, in spite of some modifications effected by recent legislation; more so in England, as Mr. Stimson points out, than in the United States. But there is a disposition to refer to the common law as though it were the decalogue or some other expression of the higher law. The common law is a mass of precedents and decisions accumulated during a period when agricultural labor was in a state of serfdom and industrial labor was subject to a mass of legislation imposed for their own benefit by the classes who controlled the government and who bought labor and wished to buy it cheap. At most points where the common law touches the labor question it is unquestionably wise and fair, but statutes have replaced it in many respects, and they may do so further without justifying sneers of demagogery, "Whenever the legislature attempts to regulate the differences between masters and workmen," said Adam Smith, "its councillors are always the masters." That is not entirely true today, but it is still true in a considerable degree. The courts do not pretend to reach those agencies

by which combinations of capital make themselves effective, while they can easily send members of labor unions to prison for analogous acts. Within a few years courts have declared illegal the action of labor unions in punishing their members for working at less than the union rate of wages. Yet the New York Stock Exchange is a capital union which would punish the cutting of commissions by suspension from one to five years for the first offense and expulsion for the second. The New York Clearing House is a capital union which will impose a fine of \$5000 upon any bank that shall collect a country check for less than a specified rate of compensation.

The objection to paying increased wages explains most of the hostility of employers to labor organizations, and underlies a good deal of legislation and more of judicial decision. In 1806 a committee of the House of Commons described the clothiers who were members of the "Institution" as "poor, deluded wretches," much as it is still customary to describe the members of labor unions, and especially denounced the "Institution" because "its inevitable, though gradual, result must be the progressive rise of wages among all classes of workmen." In 1824 a Parliamentary committee had the candor to report:

That prosecutions have frequently been carried on under the statute and common law against the workmen, and many of them have suffered different periods of imprisonment for combining and conspiring to raise their wages, or to resist their reduction and to regulate their hours of working. That several instances have been stated to the committee of prosecutions against masters for combining to lower wages and to regulate the hours of working; but no instance has been adduced of any master having been punished for that offense.

What was regarded as the public interest was the immediate interest of the classes that buy labor, and therefore it was clear that every increase of wages was against the public interest. In *The People of New York against Fisher* (1835), Judge Savage asked if journeymen bootmakers, by extravagant demands for wages, so enhance the price of boots made in one place that boots elsewhere can be made cheaper, is not such an act injurious to trade?

A growing spirit of humanity and fair dealing, together with the teachings of experience that high-priced labor is usually cheaper than the low-priced, and that countries where labor is cheap are threatened by the competition of countries where labor is dear, has greatly modified this feeling of opposition to advances in wages, but every buyer of

labor is still opposed to anything that tends to raise the price of that commodity, and the habit of courts of relying on precedents gives a somewhat disproportionate authority to cases decided when the interests of those who had labor to sell were not considered by the men who made and interpreted the laws. It may easily be shown in economics that high wages are in the public interest, but if the judges so regarded it we should have a considerable change in the tenor of judicial decisions. With a degree of frankness not often encountered in his class, Lord Brassey said in a lecture in 1877 :

Much of the objection which exists in the public mind towards trade unions rests, as it must be confessed, on the general reluctance to see any effort made to raise the price of labor.

Lord Brassey has himself supplied, largely from his own and his father's experience, many striking evidences of the economy of high wages. A mass of such evidence has accumulated since. It does not incline, and of course it should not incline, any individual buyer of labor to pay for it more than the market price, and he would be something more than human if he were not generally complaining that the price was already too high ; but with American competition as sharp in foreign markets as it is now one might suppose that the conception of the relation of the rate of wages to the general state of trade would undergo a change and that the agencies by which wages are advanced or sustained would seem less obviously "in restraint of trade," less palpably "against the public interest."

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NEW YORK.

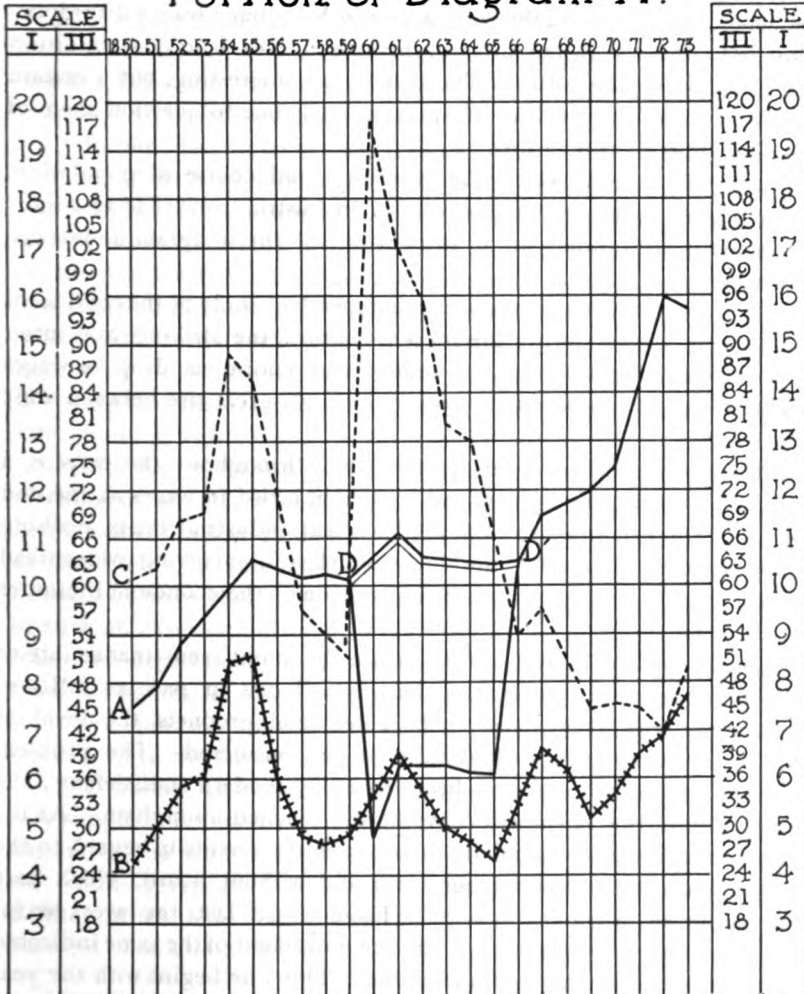
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### AN ERROR IN AUSTRIAN WAGES STATISTICS.

IN his book on "The Population of Austria on the Basis of the Census Returns of December 31, 1890,"<sup>1</sup> Dr. Rauchberg, the then secretary of the central statistical commission, gives in condensed and convenient form for the general student the valuable results of the commission's work. This he does by means of many tables, summaries, charts, and diagram. The aim of the work, however, is not so much the making of a handbook as it is to show by comparison with the returns of previous enumerations the progress of the Austrian nation,

<sup>1</sup> *Bevölkerung Oesterreichs auf Grund der Ergebnisse der Volkszählung vom 31. December 1890.* DR. HEINRICH RAUCHBERG, Hofsecretär der K. K. statistischen Centralcommission, Wien, 1895.

## Portion of Diagram A.



A. Day wages, without board, in kreuzers, Austrian valuation. (Scale III.)

B. Price of a hectoliter composed of equal parts of wheat, rye, and potatoes, in gulden, Austrian valuation. (Scale I.)

C. Number of working days necessary to obtain a hectoliter composed of equal parts of wheat, rye, and potatoes. (Real wages, Scale I.)

DD'. Corrected line for day wages.

its growth in intelligence, industry, and wealth. In the discussion of improved social conditions considerable space is given to the situation of labor, showing how, through a rise in his money wages disproportionate to the rise in the price of breadstuffs, the laborer's condition has altered for the better. The results are interesting, but a certain carelessness in his handling of statistics leads one to question some of Dr. Rauchberg's conclusions.

Diagram A deals with "the condition and course of population, price of food stuffs, and wages of labor in Austria from 1820 to 1890." Opposite is a reproduction of the portion of this diagram under discussion.

Coming upon this chart after an independent study of the conditions of labor in Austria during the present century, the striking and interesting point about it was the sudden and enormous drop in wages about 1859 and 1860 and the correspondingly great rise between 1865 and 1866.

An average fall of over 50 per cent. throughout the empire, a depression lasting five years, and as sudden a rise in wages at the end of that time would have indicated a great industrial crisis, nothing short of a cataclysm for the laboring classes, involving widespread misery, which would have left its impression on the economic literature of the time.

Dr. Rauchberg's own comments on the point seem inadequate to the occasion. His notes on Diagram A are in part as follows: "Together with the prices of the chief food products, the level of wages, the money wages of labor, is to be considered. The problem of wage statistics has not yet been solved by modern statisticians; the older administrative statistics have hardly touched upon them. At the same time there are found in their tables statements in regard to the money wage of common labor, with and without board, which may be employed for our purpose. From these last the average for the entire state was determined, and the movement of the same indicated on the diagram by the continuous line. This line begins with the year 1827, for which the first notices of wages lie before us."

"The movement of this line is to be followed according to Scale III, which expresses the height of wages in kreuzers, Austrian valuation."

<sup>1</sup> In the Archives of the Ministry of the Interior, at Vienna, are to be found the manuscript "Market Reports" sent in by the officials of the provinces in response to the imperial decree of 1813, dating back to 1819, together with annual averages for the empire as far back as 1820.

After comments on the movement of the line up to the fifties he says: "With 60 kr. it reaches temporarily its highest point. Until 1859 this level is kept with difficulty, but there follows a deep decline *under the influence of the unfortunate war and a universal condition of want*. For 1860 the average is only 30 kr. In the seventies the excessive variations cease, etc. . . .

"In the development just sketched that which gives occasion for thought is the *altogether extraordinary depression* of wages in the years 1860-1865. If the statements relative to them can be explained by the unfavorableness of the political and economic conditions, still the question is not to be set aside as to whether or no officials who collected the statistics did not take a too pessimistic view of things. On the other hand, in the explanation of the sudden rise in the level of wages beginning from the year 1866 the increase in the circulating medium is to be taken into account which found its expression in the concomitant rise of prices."

While Dr. Rauchberg thus attempts no analysis of the causes working to produce such an extraordinary phenomenon, his purpose being rather to show general progress by a more detailed comparison of conditions in the last two decades with those of the first two decades of his period, still he does not seem to doubt the possibility of such an explanation lying in the facts of war and its accompanying season of depression. As he indicates in a footnote, Dr. Rauchberg takes his figures for wages directly from the "Statistical tables for the standard question in the Austria-Hungarian Empire"<sup>1</sup> which were worked up in the Department of Finance in 1892-3.

The trouble with Dr. Rauchberg's diagram and explanation is a very simple one, and is that they are based on a mistake. The tables on wages for the standard question simply reprint, in a different form, the results given in a series of official statistics which under three different titles<sup>2</sup> have been printed from 1828 down to the present time. Between 1860 and 1865 the Statistical Bureau was reorganized, and as

<sup>1</sup> *Statistische Tabellen zur Währungsfrage der Oesterreichisch-Ungarischen Monarchie*. Verfasst im K. K. Finanz-Ministerium. Wien, 1892-3.

<sup>2</sup> (a) *Tafeln zur Statistik der Oesterreichischen Monarchie. Erste Folge, 1828-1850, Neue Folge, 1851-1865*.

(b) *Statistisches Jahrbuch der Oesterreichischen Monarchie, 1863-1881*.

(c) *Oesterreichisches Statistisches Handbuch*. Herausgegeben von den K. K. statistischen Central Commission, 1882.

a result the annual reports did not appear on time. The work of six years, 1860-1865 appeared in one volume in 1866. Owing probably to hurried work, the headings of the columns of wage statistics, in the market reports where they appear, are inverted in their order. Before and after this one volume the order is, *e. g.*, column A, *wages without board*; column B, *wages with board*. In this one volume wages with board comes first and wages without board second. The officials who worked up the tables for the "standard question" evidently, after they were once started, went on by inertia, and Dr. Rauchberg has gone a step further in indicating the explanation of a phenomenon which never existed. It would have been interesting had he had occasion to use the figures given by the same report for "wages with board" during the same six years, to see how Dr. Rauchberg would have explained the fact that in a period where wages *without board* fell over 50 per cent., wages *with board* rose over 100 per cent!

This illustrates the dangerous character of statistics as a basis of economic deduction, unless one takes some pains to see that the facts fit the figures.

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### MR. CUMMINGS'S STRICTURES ON "THE THEORY OF THE LEISURE CLASS."

IN the last issue of this JOURNAL is a paper of some length by Mr. John Cummings, criticising a book lately published for me under the title, *The Theory of the Leisure Class*. The paper is notable for its earnestness no less than for its graceful and cogent discussion. It is needless for me here to express my high appreciation of the attention which the volume has received at Mr. Cummings's hands. But circumstances have made it necessary for me to take this means of calling attention to certain passages in Mr. Cummings's discussion, where the criticism is directed rather against the apparent than against the intended drift of the argument set forth in the volume.

As editor of the JOURNAL it should have been my place, and my privilege, to forestall what I might conceive to be misdirected criticism by making the necessary suggestions to Mr. Cummings before his paper appeared in print; and, but for the untoward chance that the issue in which the paper appears was printed during my absence, this

would have been done. As it is, I am constrained to offer my explanations in the ungracious form of a reply to his criticism. There is the more excuse for so doing, since what has proved to be obscure to so acute a critic as Mr. Cummings may be expected to offer at least as great difficulties to others who may have the patience to read the book. Had I had the good fortune to say what I intended, and no more, my critic would, I believe, have been saved a good share of the corrections which he is good enough to offer, as well as much of the annoyance which he is at pains to conceal. Indeed, to such an extent does this appear to be true that the greater portion and the weightier of Mr. Cummings's criticisms appears to proceed on misapprehension that might have been obviated by a more facile use of language.

But to speak first of a point on which the difference between the book and its critic is apparently not of this verbal complexion. Mr. Cummings (p. 426)<sup>1</sup> gravely distrusts any "attempt to read modern psychology into primitive conditions," together with attempts at "a psychological reconstruction of primitive society." To the first count I plead guilty, only if "modern" psychology is taken to mean the latest views of psychological science known to me, as contrasted with older theories. Whether this constitutes an offense is, of course, not within my competency to inquire. As to the second count, I plead that any theory of culture, late or early, must have recourse to a psychological analysis, since all culture is substantially a psychological phenomenon. In any modern discussion of culture, and of cultural development, where this recourse is not had openly it is had covertly.

Mr. Cummings's criticism is directed to three main heads: (1) 'The theory of waste (pp. 427-434); (2) the relation of the leisure class to cultural change (pp. 436-439); (3) the justification of leisure-class incomes (pp. 439-453). On the first of these heads the difference between the book and its critic seems to be apparent only, due to a misconception caused by want of explicitness in the argument. As to the second, the difference between Mr. Cummings's views and mine is, I believe, less by half than appears from Mr. Cummings's strictures. Under the third head, running through some fourteen pages, Mr. Cummings develops a point of doctrine with which the book does not concern itself.

Exception is taken (p. 427) to my attempted definition of waste. It should be said that the definition in question aims to promulgate no

<sup>1</sup>JOURNAL OF POLITICAL ECONOMY, September 1899.



novel doctrine; the aim being to state discursively what is the content of a judgment concerning waste or futility. The definition may be unfortunate, but its ineptitude does not eliminate the concept of waste from men's habits of thought, nor does it eliminate the word from everyday speech. Men do currently pass opinions on this and that as being wasteful or not wasteful, and there is much evidence that they have long been in the habit of doing so. Sumptuary legislation and the much preaching of the moralists of all ages against lavish habits of life is evidence to this effect. There is also a good deal of a consensus as to what manner of things are wasteful. The brute fact that the word is current shows that. Without something of a passable consensus on that head the word would not be intelligible; that is to say, we should have no such word. As Mr. Cummings earnestly contends (p. 428), it is always the individual that passes an opinion of this kind—as must manifestly be conceded with respect to all opinions. But the consensus that prevails shows that the opinions of individuals on matters touching “the generically human” passably coincide—which, I gather, Mr. Cummings is (p. 428) unwilling to admit. If it were in place to offer instruction here, I should suggest that some reason for this coincidence of views is to be found in a community of descent, traditions, and circumstances, past and present, among men living in any given community, and in a less degree among men in all communities. It is because men's notions of the generically human, of what is the legitimate end of life, does not differ incalculably from man to man that men are able to live in communities and to hold common interests.

It is the use of the word “impersonal,” in the sense of non-invidious or non-emulative, that seems particularly to have proved misleading. And this, probably, has provoked Mr. Cummings (p. 429) unguardedly to deny the practical possibility of waste. This result of my escapade, I need not say, I deeply regret. The like is true for the word “invidious,” though on this term the critic's quarrel is with the current use of the word, not with any misuse of it at my hands. My critic's discussion at this point also carries the implication that any item of consumption which is in any degree useful, as, *e. g.*, “costly church edifices,” cannot at the same time be in any degree wasteful. This seems an unwarranted application of the logical expedient of “exclusion.” As bearing on this passage (p. 429), it may be added that even if “the labor expended on the church edifice . . . be considered in

any sense wasteful," that need not imply that the edifice or its consumption according to the accepted method is disallowed by economic theory. It is, for all I can see, competent for an economist to inquire how far such an edifice and the employment of time and effort involved in its use may be industrially unproductive, or even industrially disserviceable, if such should be the outcome of the inquiry. Such an endeavor, I believe, need bring no obloquy upon the economist, nor need he thereby invade the moralist's peculiar domain, nor need it flutter the keepers of the idols of the tribe. The economic bearing of any institution is not its only bearing, nor its weightiest. The ends of human culture are manifold and multiform and it is but the meaner of them, if any, that are fairly comprised in that petty side of life into which it is the economist's lot to inquire. An electrician might, without blame, speak of the waste of energy that is inseparable from the use of storage batteries. Indeed, if he is discussing the efficiency of this means of utilizing a source of power, he could not avoid a detailed inquiry into this feature of their use. But his endeavor to determine the magnitude of the unavoidable or of the ordinary waste involved would not commit him to a condemnation of the batteries, nor would it make him an object of suspicion in the eyes of his fellow-electricians.

The like critical use of exclusion, applied to alternatives which it had not occurred to me to conceive of as exclusive alternatives, recurs in Mr. Cummings's observations on the conservatism of the leisure class (*e. g.*, pp. 437-438), and on the differentiation of employments between the pecuniary and the industrial occupations (pp. 443-453). It is on the strength of such a needless application of exclusion that Mr. Cummings is able to say (p. 432): "In Dr. Veblen's philosophy, all our judgments are based on invidiousness." This should be so amended as to read: "*Some of* our judgments are *in part* based on invidiousness." It will be seen that such an amendment would materially affect Mr. Cummings's further development of the theme, particularly as regards his strictures on the views advanced in the book. Similarly the *reductio ad absurdum* on page 434, where the view that elegance of diction and orthography serve an invidious purpose is taken logically to contain the further position that speech can serve no purpose but an invidious one, and that the origin and sole use of language lies in the invidious distinction which it lends the user. This resort to excluded middle is in touch with the rhyme of a modern poet, who sings:

I'd rather have fingers than toes ;  
 I'd rather have ears than a nose ;  
 etc.,<sup>1</sup>

overlooking the possibility of combining these several features in a single organism.

These pages (428-435) are a source of comfort and of despair to me. Of comfort in that I find in them a cogent exposition of views which I had attempted to set forth ; of despair in showing how my attempted exposition has proved unintelligible even to a reader who had already beforehand reached an articulate recognition of very much of what I attempted to say. For, if I am not mistaken, Mr. Cummings's views, on the subject of waste, as set forth fragmentarily in these pages passably coincide with those intended to be expressed in the volume which he criticises.

Much the same is true for what Mr. Cummings has to say (pp. 436-439) on the conservative effect of the institution of a leisure class. The point at which his development of theory on this head chiefly differs from that of the book—as I had conceived it—is his insistence that this conservative effect is, always and in the nature of things, of a salutary kind. On this I had, perhaps weakly, reserved decision, as I am still compelled to do. Similarly as regards Mr. Cummings's conviction (p. 437) that "Theoretically there is but one right course of social evolution, while the number of wrong courses is infinite." For my part, I have not had the fortune to reach a conclusion, or to attempt one, on this point. I am at a loss to understand what such a thesis may mean to an evolutionist, and I believe it would get the assent of fewer men today than at any previous time. But the main drift of Mr. Cummings's development I gladly assent to. In particular, I am at one with him in his view (p. 437)—which reads like a summary restatement of the argument of the book—that "whatever is, is clearly, at one and the same time, both right and wrong." This proposition Mr. Cummings has, by an unfortunate oversight, placed in contrast with a partial statement of the same view as expressed in the book.

Attention may be called to a further point of detail in this connection. Mr. Cummings (p. 442) takes exception to the view that man's environment changes with the growth of culture. He finds that the environment is "relatively fixed;" that "climate and soil make up pretty much all there is at the basis of that environment, and these

<sup>1</sup> GELETT BURGESS, *The Purple Cow* (San Francisco, 1898).

change but little." All this is no doubt true if environment be taken to mean climate and topography; but for the purpose of my inquiry—an inquiry as to why and how the habits of life and of thought of the individual come to be modified—for this purpose customs, conventions, and methods of industry are no less effective elements in the environment than climate and topography, and these vary incontinently.

Mr. Cummings also (pp. 440-444, 449-452) offers a theory as to the equity of the existing distribution of property and of the incomes that accrue to the various classes in the community. This discussion is directed to a point not touched upon in my inquiry. But since my critic has been led to read into my argument certain implications on this head which he finds it necessary to refute, it is not improbable that others may read the argument in the same sense and feel the same need of refutation. It may therefore be in place to point out why I have not entered upon a discussion of this topic. The reason is that the whole question of such a justification is beside the point. The argument of the book deals with the causal, not with the moral competence of the phenomena which it takes up. The former is a question for the economist, the latter for the moralist. The manner in which Mr. Cummings has misread the argument—as I conceive it—may be illustrated by citing several specific propositions which are mistakenly conceived to bear upon the argument. He says (p. 440): "The accumulation at one end is conceived to be at the expense of the other end in the sense that the other end would have more if it had *its just deserts*." This should read: "is *not* conceived to be at the expense of the other end in the sense," etc. In particular, there is in the volume no reference, express or by implication, to "just deserts." Similarly, unless I am mistaken, it contains no suggestion that a "confiscation" (p. 449) of the products of the "productive laborers" takes place. It does not raise the question as to whether the captain of industry on the one hand or the laborer on the other hand "earn" (pp. 440, 441) their respective incomes. Mr. Cummings (pp. 440-452) assumes the validity of the natural-rights dogma that property rests on production. This relation between production and property rights is a moral, not a causal relation, if it is assumed to subsist at all. As regards Mr. Cummings's advocacy of the claims of the captain of industry to his income, on this ground, it proceeds on the bold though ancient metaphor by force of which bargaining is conceived to produce goods. And as regards the claims of the laborer to a property right

in his product, an exhaustive analysis would probably show that they rest on similarly inconclusive grounds. I am therefore unable, in view of well-known facts, to go with Mr. Cummings in his view (p. 453) that a person who does not produce wealth cannot acquire it except by a miracle. One might cite the trite case of the man with the nutshells and the peppercorn, when the miraculous element is, at the best, held to be apparent only.

In a similar connection (p. 448) Mr. Cummings, in a restatement of my argument, says: "it is a game of chance, not of skill, this game of ownership, and the risks assumed are devoid of economic significance." This should read: "*in some part of chance, though chiefly of skill,*" and "the risks assumed are *of the gravest* economic significance." Also (p. 448): "since individual members of the wealthy leisure class resort to chicanery and fraud, therefore nobody else does." This is an instance of Mr. Cummings's use of exclusion. It should read: "individual members of the wealthy leisure class resort to chicanery and fraud, *as do also many other persons.*" Again (p. 449): "The unscrupulous man is not, by virtue of his unscrupulousness, a member of any class." To this I beg to give a cordial assent; as also to the proposition (p. 451) that "labor alone [unaided by intelligence] does not produce." So, again, I accept, with a covetous acknowledgment of its aptness, Mr. Cummings's proposition (p. 447) that, instead of its being the sole player in the game, the leisure class "is peculiar in that in playing this game of ownership in which all engage, *its members have succeeded conspicuously.*" This statement contains the central position of the argument against which it is directed. The chief difference between the leisure and the industrial classes is conceived to be a larger endowment on the part of the former in respect of those aptitudes and propensities which make for pecuniary success.

In the pages which Mr. Cummings devotes to a defense of the captain of industry and his income the point of serious difference between his exposition and the argument of the book is his rejection of the distinction between "pecuniary" and "industrial" employments. He insists that there is no tenable distinction between the employment of the financier and that of the day laborer, both alike being "productive" and both alike owing their productivity and their income-yielding character to the intelligence exercised. This does not run altogether on the same ground as the argument in the volume, and it seems a less conclusive objection to me than it appears to have

been to Mr. Cummings. It seems necessary to explain that the intended point of the argument concerning "pecuniary" and "industrial" employments was to indicate the different economic value of the aptitudes and habits of thought fostered by the one and the other class of employments. The question turns on a difference of kind, not on a difference of degree, in the intelligence and spiritual attitude called for by the different employments, in such a way that the one line of employment calls for more of one range of aptitudes while the other line of employments calls for more of another. It is the ethological bearing of employments that is chiefly in question, my endeavor being to point out how employments differ, for the purpose in hand, in respect of the training and the selective stress to which the character of these employments subjects the persons employed. "The distinction here made between classes of employments is by no means a hard and fast distinction between classes of persons." Few persons escape having some experience of both lines of employment, but the one or the other line of employment commonly is accountable for the greater portion of the serious occupation of any given person. So that while the disciplinary effect of either is seldom unmitigated in any concrete case, still the existing differentiation of occupations commonly confines the attention of any given person chiefly to the one or the other line of employment, and gives his training a bent in the one or the other direction. In the earlier phases of modern industry, where the owner was at the same time the foreman of the shop and the manager of the "business," as well as in those modern industries in which the division of labor is relatively slight, the distinction does not obtrude itself on the attention because the separation of employments is not marked. Probably on this account the distinction is, at least commonly, not made in the received discussions of economic theory, which have for the most part taken their shape under the traditions of a less highly developed differentiation of employments than the existing one. Still, even then the different, or divergent, disciplinary trend of the pecuniary and the industrial activities of any given individual must be held to have had its force, although the unblended effect of the one or the other may not be shown in any concrete case. It is to be added that in the somewhat numerous marginal cases, where these lines of employment cross and blend, as, *e. g.*, in retail shopkeeping, in newspaper work, in popular art, in preaching, in sleight-of-hand, etc., it is perhaps impossible for the nicest discrimination to draw a neat distinction between them.

Since the distinction in question is not an accepted article of economic theory, it need occasion no surprise that my critic should fail to apprehend it or to admit it; but his failure to apprehend the distinction does not affect its reality. As I conceive it, the distinction at its clearest marks the difference between workmanship and bargaining. Both equally are economic activities, but both are not in the same sense industrial. The "industrial" activities, whose characteristic is workmanship, of course include the work of directing the processes of industry as well as of contriving the aims and ideals of industry—such work as that of the artist, the inventor, the designer, the engineer and the foreman. This range of employments has to do with adapting the material means of life, and the processes of valuation constantly involved in the work run on the availability of goods and on the material serviceability of the contrivances, materials, persons, or mechanical expedients employed. They have to do with relations of physical cause and effect. In the received scheme of economic theory these employments fall under the head of "Production." The "pecuniary" employments, on the other hand, should, in the received scheme, fall under the head of "Distribution." They have to do with the distribution of wealth—not necessarily with the distribution of goods to consumers. The processes of valuation involved in this work run on the exchange values of goods and on the vendibility of the items with which they are concerned, and on the necessities, solvency, cupidity, or gullibility of the persons whose actions may affect the transaction contemplated. These valuations look to the pecuniary serviceability of the persons and expedients employed. The objective point of the former range of valuations is material use, of the latter pecuniary gain. Indirectly this latter class of employments may have a very considerable effect in shaping industrial life, as witness, *e. g.*, the industrial changes incident to the formation of trusts; and it is this indirect effect that has commonly received the attention of the economists. Similarly, of course, the "industrial" employments rarely if ever are without a pecuniary bearing.

It may be said by way of further characterization that the pecuniary employments, and the pecuniary institutions to which they give rise, rest on the institution of private property and affect the industrial process by grace of that institution; while the industrial employments, and the industrial differentiation to which they give rise, rest chiefly on the physical conditions of human life; but they have their pecuniary

bearing by virtue of the institution of ownership, since all pecuniary phenomena lie within the range of that institution. As J. S. Mill might be conceived to say—as, indeed, he has virtually said—the pecuniary employments are conditioned by human convention, the industrial by the unalterable laws of nature.

Either line of employment may be said to require and to foster a certain intelligence or sagacity in the persons so employed, but the intelligence so fostered is not the same in both cases. The sagacity characteristic of the pecuniary employments is a sagacity in judging what persons will do in the face of given pecuniary circumstances; the sagacity required by the industrial employments is chiefly a sagacity in judging what inanimate things will do under given mechanical conditions. When well developed, sagacity of the former complexion may be expected to make a shrewd salesman, investor or promoter; intelligence of the latter kind, a competent engineer or mechanician. With the former goes an interest in gain and in contests of shrewdness and personal advantage; with the latter goes an interest in workmanlike efficiency and in the play of inanimate forces. It is needless to add that men whose occupations are made up of the latter class of employments also commonly have something of the pecuniary aptitudes and find more or less frequent exercise for them; but it is also bootless to contend that there is no difference between the “pecuniary” and the “industrial” employments in respect of their disciplinary and selective effect upon the character of the persons employed. Neither should it be necessary to point out that the pecuniary employments, with the aptitudes and inclinations that give success in them, are, in their immediate bearing, in no degree serviceable to the community, since their aim is a competitive one. Whereas the latter commonly are serviceable in their immediate effects, except in so far as they are, commonly under the guidance of the pecuniary interest, led into work that is wasteful or disserviceable to the community.

I have permitted myself to speak at length and in this expository way on this point because Mr. Cummings's criticism has shown that the earlier discussion on this topic must have been lacking in clearness, while it has also raised the apprehension in my mind that the distinction between “pecuniary” and “industrial” aptitudes and employments may be more novel and more recondite than I had appreciated.

In conclusion Mr. Cummings speaks in terms of high appreciation of the “clever” use of terminological expedients which he finds in the



volume. There is, however, a suggestion that, with all its cleverness, this consummate diction is charged with some malign potency, somewhat after the manner of the evil eye. Sincere, and withal kindly, as may be the intention of these comments on the "consummate cleverness" shown in the choice of terms, I cannot but mistrust that they express the impulses of my critic's heart rather than the deliverances of a serene intelligence. I apprehend they will not commend themselves to thoughtful readers of the volume. For instance, so serious a person as Mr. D. Collin Wells would be able at the most to give but a very materially qualified assent to Mr. Cummings's eulogy. Mr. Wells<sup>1</sup> expresses disappointment on precisely the point that stirs Mr. Cummings's admiration. Indeed, I catch, in Mr. Wells's observations on this matter, something of an inflection of sadness, such as argues a profound solicitude together with a baffled endeavor to find that the diction employed expresses any meaning whatever. In this bewilderment Mr. Wells, I regret to say, is not alone. The difficulty has been noted also by others, and to meet it is a good part of the purpose of what has been said above.

But, while he finds the terminology clever, Mr. Cummings deprecates the resort to terms which, in their current use, convey an attitude of approval or disapproval on the part of those who use them. This, of course, comes to a deprecation of the use of everyday words in their everyday meaning. In their discourse and in their thinking, men constantly and necessarily take an attitude of approval or disapproval toward the institutional facts of which they speak, for it is through such everyday approval or disapproval that any feature of the institutional structure is upheld or altered. It is only to be regretted that a trained scientist should be unable to view these categories of popular thought in a dispassionate light, for these categories, with all the moral force with which they are charged, designate the motive force of cultural development, and to forego their use in a genetic handling of this development means avoidance of the substantial facts with which the discussion is concerned. A scientist inquiring into cultural growth, and an evolutionist particularly, must take account of this dynamic content of the categories of popular thought as the most important material with which he has to work. Many persons may find it difficult to divest themselves of the point of view of morality or policy, from which these categories are habitually employed, and to

<sup>1</sup> *Yale Review*, August 1899, p. 218.

take them up from the point of view of the scientific interest simply. But this difficulty does not set the scientific necessity aside. His inability to keep the cultural value and the moral content of these categories apart may reflect credit upon the state of such a person's sentiments, but it detracts from his scientific competence.

If the free use of unsophisticated vulgar concepts, with whatever content of prejudice and sentiment they may carry, is proscribed, the alternative is a resort to analogies and other figures of speech, such as have long afflicted economics and have given that science its reputed character of sterility. In extenuation of my fault, therefore, if such it must be, it should be said that if one would avoid paralogistic figures of speech in the analysis of institutions, one must resort to words and concepts that express the thoughts of the men whose habits of thought constitute the institutions in question.

THORSTEIN VEBLEN.

## BOOK REVIEWS.

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*Value and Distribution: A Historical, Critical, and Constructive Study in Economic Theory.* Adapted for advanced and postgraduate work. By CHARLES WILLIAM MACFARLANE, PH.D. Philadelphia: J. B. Lippincott & Co., 1899. 8vo. pp. vii + 317.

THE character and purpose of this work are adequately described in the subtitles, and it may be stated at once that the book fully justifies the expectations raised by the title-page. It may be enthusiastically commended to teachers and students of higher economic theory. It is pure theory, but not theory in the air. It is written in a spirit that shows the writer to be interested in the applicability and outcome of his theories.

The chief service rendered by the volume is the admirable conspectus it gives of the theoretical work of the present generation of economists. All the important discussions, whether in books or in periodicals, have been carefully sifted, and the results put together into some sort of a coherent whole. But one exception is to be made to this statement: there is only the most sparing reference to the work of French, Dutch, and Italian economists. The harmonious setting, however, which Dr. Macfarlane has been able to give in his system to the seemingly divergent views of the several modern schools of English, German, and Austrian economic theory, is an inspiring proof that recent economic controversies have not been in vain. The book is a striking vindication of Professor Marshall's claim that there has been "no real breach of continuity in the development of the science."

Dr. Macfarlane's point of view is eclectic, but his is an organic, not a merely mechanic, eclecticism. We quote a single example *in extenso*, for it will serve much better than a host of descriptive adjectives to convey the method and spirit of his work:

So far as the present writer can see, the entire discussion as to the precedence of utility or disutility in the determination of price is not only without any real profit, but it is actually misleading. For, no matter what the seeming order of precedence may be, the fact remains that, in the case of freely

reproducible goods (normal price), the determination is contingent not upon one but upon two factors. It is true that the price of such a good may be *measured* either in terms of marginal utility or of marginal disutility, but its *determination* depends upon the coincidence of these two factors.

When, therefore, the Austrian economists tell us that in last resort the value even of freely reproducible goods is determined by marginal utility and not by cost, the question certainly seems a pertinent one: What determines the point at which this margin is fixed? The immediate answer is, of course, that it is fixed by the limitation of the supply of the commodity; increase this supply, and, other things being equal, marginal utility declines. This, however, only raises the further question, How or by what is the supply limited? In the case under discussion, that of freely reproducible goods, the only limitation to the supply is found in the cost of the goods, or in the marginal disutility endured in their production (p. 70).

The author's own constructive work is interestingly original in some of its details:

The fact from which all studies of distribution must start is the *price* of commodities, and what we have to determine is how this price is divided among the several parties to the transaction.

Hence the author's normal-value theory of distribution. He establishes three forms of surplus—the differential, the marginal, and the normal; these are respectively rent, profit, and, under the normal surplus, interest on capital and gain of labor. The differences between these several surpluses are otherwise defined by calling the first the price-determined surplus, the second the monopoly-price-determining surplus, and the last the normal price-determining surpluses of capital and labor.

Rent and profit are surpluses that may be secured by all four factors of production, while interest and gain of labor can only be secured by those factors that are freely reproducible.

These few items may serve to give some indication of the path taken by the author. It is a path that leads to some new fields, and those who take it will be richly repaid. The work deserves the serious attention of all students of economic theory.

A. C. MILLER.

*The Economic Policy of Colbert.* By A. J. SARGENT, B. A. London: Longmans, Green & Co., 1899. 8vo. pp. 138.

THIS monograph will fill, after a fashion, a gap that has long existed in the English literature of mercantilism. It is, however, not so much a reasoned interpretation as an historical account of Colbert's policy. It deals, therefore, not so much with Colbert's ideas as with his acts and reforms. As a contribution to the history of economic thought, it is inferior to the well known French and German studies of Colbert's remarkable system.

Separate chapters discuss Colbert's reforms in taxation, his industrial policy, and his regulation of foreign trade. The writer finds great merit in Colbert's work as a financier and as an administrator, but his system of trade-regulation, as a whole, he concludes was "vicious" and "brought little but evil to France" (p. 117). Little historical evidence, however, is offered in support of this, the conventional English view. It is taken as "a matter of history" that seems to need no proof; and so far the author seems to be untrue to his own principle of criticism, that "any practical system of economics must be relative to its age, to the conditions under which it works, and the dominant ideas and principles of which it is the expression. It is to be judged as a means, not as an end" (p. 51). Now Mr. Sargent finds the principle of national self-sufficiency to be the corner stone of Colbert's system—the goal of all his policy. And so it was in a sense. But Colbert's economic policy cannot be judged by itself. For the self-sufficiency it aimed at was simply to be the means to the achievement of a great political destiny—a destiny that called for men, ships, and money on a hitherto unknown scale. His immediate task, one forced on him by the extravagant ambitions of the Grand Monarque, was to provide resources for war; and, as the agriculture of France at the time was depressed, her industries languishing and undeveloped, and her trade restricted, his attention was directed to reviving, encouraging, and extending them. His economic policy was, therefore, conceived in the light of a political policy and a financial necessity. It is, therefore, from this larger point of view that Colbert's statesmanship must be judged. We cannot isolate his trade regulations from the larger policy of which they were but a part. We must know the man and his monarch before we can hope to understand his policy.

A. C. M.

*The Economic Writings of Sir William Petty, Together with the Observations upon the Bills of Mortality, more probably by Captain John Graunt.* Edited by CHARLES HENRY HULL, Ph.D. Cambridge [Eng.] University Press, 1899. 2 vols. 8vo. pp. xci.+700.

LORD EDMUND FITZMAURICE, who had intended to make a collection of Petty's works, may rest content that, in yielding the task to Professor Hull, of Cornell University, the work has been done with an erudition, accuracy, intelligence, and thoroughness which leave nothing to be desired. Seldom have the man and the task been so perfectly fitted. The result has been an achievement for American scholarship of which the brotherhood of economists in this country may well be proud. It may serve as a model for others who contemplate such studies; although few men are likely to have the antecedent library training and the painstaking carefulness of Professor Hull in minute affairs of bibliographical detail. In this respect the volumes are unusually valuable to the scholar.

One need read no further than the admirable life of Petty to be satisfied as to the quality of the work. No cross-reference seems to have been possible which has escaped the vigilance of the editor. Nor has the strictly impartial attitude of the historian ever been wanting, so far as I have been able to discover. The life of the man, clearly enough, is the justification of the existence of this edition. Petty's individuality and character were extraordinarily interesting. Not only a professor of anatomy at Oxford, but a doctor of medicine, a professor of music at Gresham College, a designer of fast sailing boats ("when he had a fit of double bottom"), Evelyn could say of him, also: "There is no better Latin poet living when he gives himself that diversion." Not only was he a clever actor, but Pepys found him "the most rational man that ever he heard speak with a tongue." More than all this, Petty played a prominent rôle in the politics of Ireland and England, showed great administrative capacity, courage, independence, and diplomatic skill; a follower of Cromwell, he remained on good terms with the Crown after the Restoration. Of an original and creative mind, he was, of course, one of the charter members of the Royal Society, and a party to the mathematical and scientific discussions of the time. In his fertile inventive capacity, eagerly interested in the practical questions of the day, and always acting so that he might have

an influence on their solution, Sir William Petty reminds one very strongly of a modern economist, David A. Wells.

Intellectually, Petty's achievements afford a basis for legitimate admiration. He had no body of economic law to lean upon; consequently his observations have a freshness and dash which are refreshing. There was nothing stereotyped in his reasoning or in his methods. In Graunt's *Observations* one suspects the presence of Petty when speaking of the effect of rickets on mortality, advancing by irregular starts and jerks (p. 358):

"Now such back-startings seem to be universal in all things; for we do not only see in the progressive motion of the wheels of *Watches*, and in the rowing of *Boats*, that there is a little starting or jerking backwards between every step forwards, but also (if I am not much deceived) there appeared the like in the motion of the *Moon*, which in the long *Telescopes* at *Gresham Colledge* one may sensibly discern." One did not need the *ultra crepidam* note of the author referring to the shaky telescope to be reminded of the occasional lapses of the economist traveling in an untrodden country.

Likewise, the dryness of statistics, even at the hands of one of the first actuaries, have a compensating charm, when we are shown that the growth of London must stop of itself before 1800; or when Petty drives from their position the skeptics who claimed that the whole earth could not furnish matter enough for all those who must rise on the Resurrection Day (p. 467).

Petty's economic studies and his appeal to statistics are enough superior to the work of that day to give him an honorable place in the history of political economy. The appointment to the army in Ireland which bent his whole career gave rise to valuable studies, which demanded the careful treatment and the accessibility which our editor has given them. The easy access furnished to these materials is a lasting service for all who are to come after us. Nothing is omitted. A superlatively good index, the lives and studies of the introduction, the examination given to the documents, the texts themselves, the bibliography, and the extraordinary conscience put into the notes and references, altogether unite in making a wholly satisfactory and admirable piece of workmanship.

J. LAURENCE LAUGHLIN.

*Die Feldgemeinschaft in Russland. Ein Beitrag zur Sozialgeschichte und zur Kenntniss der gegenwärtigen wirthschaftlichen Lage des russischen Bauernstandes.* By WLADIMIR Gr. SIMKHOWITSCH. Jena: Gustav Fischer, 1898. 8vo. pp. xvi+399.

THE village or *Mir* system of land ownership and cultivation is, as is well known, still the prevailing one over a large part of the Russian Empire. In its superficial aspects this system resembles so closely the organization advocated as an ideal form by certain socialists that a careful analysis of its leading characteristics by a Russian, who is himself in sympathy with socialistic aspirations, has a peculiar interest. Herr Simkhowitsch has still another qualification for his task. When he began collecting material for his monograph, shortly after the famine of 1893, he regarded the *Mir* system as an excellent thing. As a result of his study, as he explains in his preface, he has reached the conclusion that "the ownership of land in common," as it prevails in Russia, "is in every respect an unjust and untenable institution, . . . which makes the Russian peasantry the most miserable proletariat in the world." The "equality" supposed to result from the system he now regards as a "dream," while he is fully convinced that "the institution as a whole has already reached the last stage in its decomposition." He thus presents the main thesis in his essay with the eloquence of a recent convert.

The first hundred pages of the monograph deal with the origin and history of the village system. Though no one but a specialist would be competent to decide as to their value, one who is not such may venture to point out that their tone, which is frankly argumentative rather than judicial, suggests that the author is too full of his own side of the case to take an impartial view of that of his adversary. His conclusions are clearly expressed, and may be summarized as follows: The *Mir* system is not hoary with antiquity, as some assert, nor yet an offshoot of the Teutonic *Mark* system, as others claim. It grew out of the feudal system, and, like that system, attained its greatest extension under Catherine II. (1762-1796), who reduced the Russian peasant to a position little above that of a slave. Thus the most important feature of the system, historically, was not joint ownership of land, but joint responsibility for taxes and other burdens. Like his English prototype, the Russian over-lord found it easier to deal with corporately responsible villages than with single individuals. Firmly established



when feudalism was abolished in 1861, the *Mir* has been perpetuated by the government, partly because it, too, finds the village an easy unit for taxing purposes and partly from that fear of radical change that is the inevitable accompaniment of despotic rule.

The present organization of the *Mir* and some of the problems connected with it are discussed in the body of the monograph. The author shows how the system has been unified by recent edicts until now a single plan of village government is practically universal. The membership of the *Mir* may be confined to an official list of villagers, modified from time to time by the *Mir* itself, or it may embrace all of the heads of families in the village, or it may be extended to include all adults born or adopted into the *Mir*. The principal task of the *Mir* government is the division of the common land. This may only take place in consequence of a two thirds affirmative vote, and since June 2, 1893, may not occur more often than once every twelve years, unless the *Mir* has decided to dissolve. Dissolution may take place any time that two thirds of the members of the village desire, and is preceded by a final division of the common land, which thereafter becomes private property. At each general division the land is supposed to be divided equally between all members, as are taxes and other burdens. Meadows, commons, and forests are of course used in common, as are some of the necessary agricultural implements.

The final chapter in this part of the monograph discusses "the disadvantages of common ownership." At the outset, the author acknowledges the force of the statement made by Mackenzie Wallace, that to ascribe the backward condition of Russian agriculture to the *Mir* is as reasonable as to connect the American Indian's lack of proficiency in classical philology with the absence of universities from his prairies. Nevertheless he shows how the *Mir* system discourages in countless ways the development of intelligence, enterprise and thrift, and prevents that assimilation of western ideas and that imitation of western methods which but for it would almost certainly take place. Three of these obstacles merit special mention: (1) The joint responsibility of all peasants for the taxes falling upon their village discourages the accumulation of capital. The property of the successful cultivator may at any time be seized to pay the dues of his unsuccessful neighbors, and the only sure way to escape this calamity is to avoid having any tangible property. The situation is thus similar to that which prevailed in rural France before the Revolution,

when to display wealth was to court disaster. (2) The frequent re-divisions of the village land discourage cultivators from undertaking any permanent improvements. Though mitigated in part by the decree of 1893, referred to above, this is still a serious evil. (3) The increase in population has rendered the allotments in many villages "dwarfish" in size, and prevents the peasantry from aiming at anything beyond eking out a miserable existence. The general conclusions of the author are that though the *Mir* cannot be held responsible for all the shortcomings of the Russian peasantry it is largely to blame for their lack of ambition, of capital, and of acquaintance with modern methods of cultivation. Though favoring socialism as an ultimate goal, he believes with the followers of Karl Marx in the educational value of competitive capitalistic production as a stage in national development. He believes that private property and freedom of contract must be carried to the same lengths in Russia that they have been in the western world before the people will be ready to substitute for the unrestricted despotism to which they now submit, the wished-for social democracy. Finally, he believes that Russian officialdom is already struggling between the horns of a painful dilemma. It is realized, on the one hand, that the *Mir* must go if the revenue of the government is to be increased appreciably, since by its abolition alone can the productiveness of the land of the country be greatly increased. On the other hand, it is perceived with equal clearness that the *Mir* organization alone keeps the peasantry in the mediæval attitude of mind indispensable to the stability of the Czar's power. In the author's opinion, the forces making for the suppression of the *Mir* are too strong to be successfully opposed, but he ventures no prediction as to the time that will elapse before these forces triumph.

Though full of valuable information, and conceived in a scientific spirit, the monograph is badly arranged, bristles with typographical errors—over a hundred being noted by the author himself—and is without an index.

HENRY R. SEAGER.

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*The Modern Farmer in His Business Relations.* By EDWARD F. ADAMS. San Francisco: N. J. Stone Co., 1899. 8vo. pp. 662.

SOME men write books for the doctor's degree. Some write for

fame or lucre. Some write because they have something to say. Mr. Adams is in the latter class.

The old farmer's condition is clearly depicted. He was not a business man, but because his own labor supplied most of his wants directly, his business relations were extremely meager. Specialization and division of labor are constantly bringing the farmer to a position where the same business qualities are needed for his success as are required by any other business man. He must be a working man in addition. What these qualities are and how to acquire them, Mr. Adams has learned by practical experience, by close and keen observation, and by thoughtful reflection. He also possesses in a marked degree the ability to make clear to his readers the thought that is in his own mind. One wishes that economists might be gifted with a style as clear, forcible, and convincing.

From reading Mr. Adams' pages one would think that they were written before the present era of prosperity had reached the farmers. Indeed, he states emphatically that the days of agricultural booms and successful speculation in farming lands are numbered. Instead of trying to make a fortune or even pay his debts out of the increase in land values, the farmer must settle down to business and learn

How to produce crops which will sell for more than they have cost. If he cannot in the long run do this, his inevitable destiny is to become the servant of someone who knows how to direct his labor to profitable results. Below this lies the problem as to whether the majority of men possess the business ability requisite to successful farming under modern conditions, and upon the answer to this question depends the future of our rural civilization. If it be decided in the affirmative, the race of independent farmers will continue; if in the negative, farm labor will come to be exploited by able men conducting huge agricultural operations, just as mechanical labor is now exploited by captains of industry.

Economists have usually assumed that agriculture differed so much from manufacturing industries, that the eye of the interested master was of so much importance on the farm, that agricultural operations on a large scale were likely to fail. But as farming becomes more a business and less an art the small farmer is likely to find himself at an increasing disadvantage. He has been able to maintain himself hitherto by selling the fertility of his virgin soil. The test is coming with soil exhaustion. No business man can survive and practice the wasteful methods that are common in American agriculture. In the corn belt

one third of what the farmer produces is commonly not utilized at all. And in selling instead of feeding the other two thirds of his crop, the farmer hauls away nitrogen and other elements of fertility, which, when bought in the shape of fertilizer cost him as much as he receives for the crop sold. This is certainly impairing his capital at a frightful rate. It has been practiced hitherto because when one farm was exhausted another was available farther west. The hope that the newly acquired possessions will furnish new fields to exploit may afford an explanation of the expansion sentiment in the agricultural regions.

In almost every other line of business, men who were ignorant enough to allow waste far less than the average farmer practices have long since been superseded by men who make their profits out of the by-products, or the waste that has been saved. We have viewed with apprehension this process of concentration in other fields, but have felt that on the farms we were assured of a class of independent citizens who have a stake in the country. Populism did much to shake our confidence in the conservatism of the farmer. A few good crops and a season of prosperity among the farmers have apparently allayed the discontent. But unless the farmer changes his business methods, avails himself of the knowledge which our agricultural colleges are discovering for him, and makes the most of his opportunities, he is doomed to the fate that has already overtaken most small manufacturers. Knowledge and hard, persistent work are the means our author points out for the salvation of his independence.

Of course, if the small farmer loses in the struggle and agricultural syndicates take over the production of our food and raw materials, Mr. Adams's book will then have only an historical value. But the loss of the independent farmer means a greater change in our industrial system than many of us have yet contemplated. If this book could be put in the hands of every farmer, carefully studied by him, and its teachings heeded, it would do much to assure the maintenance of his position.

For the many things which Mr. Adams does not attempt to tell the farmer in this book, he tells him the best sources of information, or the best men to rely on. And his discussion of the farmer's relations to his family, his fellows, his competitors, his creditors, the politicians, the bankers, the commission merchants, the speculators, the tradesmen, and the tax-gatherers, is so full of common sense and practical advice that one feels like becoming an agent for the book.

In treating the questions of the day, such as the tariff, export bounties, single tax, currency, trusts, socialism, the referendum, and the labor question, the plan of setting forth clearly the strongest arguments on both sides has been adopted. The chapter on socialism merits more than a passing notice. It is impossible to make an abridgment of the author's discussion that will do it justice, but his novel and fundamental position can be briefly stated.

1. The farmer is the foundation of society, the only class absolutely necessary to its existence. This is undeniably true.

2. No reconstruction of society, socialistic or otherwise, can be undertaken without his approval. The truth of this proposition is not so apparent. If the non-agricultural classes outnumber him, why can he not be coerced? If they be more skillful in political manipulations why can farmers not be divided or outgeneraled, and the change secured without their consent?

3. If there is to be a "uniform, basic standard of life and work," the needs of the farmer, not those of the urban resident, must furnish that standard. His standard is fixed by the forces of nature at a twelve-hour day of moderate work. Plain food and clothing, and a modest dwelling are all he receives for his twelve hours work. He will not submit to the efforts of the trade unionists, the only practical socialists in America, to secure a standard for themselves which compels him to give the product of more than one day's labor for the product of a day of their labor (pp. 125, 427, 432).

Perhaps he will not ultimately, but in many cases he does submit to uneven terms of exchange at present, and probably will continue to do so as long as urban workmen are better organized or more skillful in their bargaining than the farmer. Furnishing the necessities of life gives the farmer no assurance that he will fix the standard of living. So long as the farmers compete on an unorganized basis with other groups more intelligent and better organized, the strength of their position as the only necessary class is likely to be of no avail. When all groups are organized in unions, trusts, and associations, as the author desires, then if a uniform standard is to be fixed, the farmer will be most likely to impose his standard. But, as Mr. Adams has pointed out more than once, all the conditions surrounding the farmer tend to prevent organization, and he is likely, for a long time to come, to lose more in his struggle with other groups through lack of organization than he gains by furnishing the necessities of life. Even among

that most intelligent class of farmers, the California fruit growers, co-operation has been secured with the greatest difficulty and under stress of competition that, without combination, threatened absolute ruin. No writer has given a better account than Mr. Adams of the advantages of co-operation, and no one has given a statement of the practical difficulties in the way of securing co-operation that compares with Mr. Adams's lucid description of the experience of California organizers and co-operators. His chapters on co-operation are well worth the attention of economists. They are not calculated to increase the enthusiasm of the hopeful promoter of altruistic experiments. Although the author, despite an experience that would dishearten, if not sour, most men, is firmly convinced that co-operation will come nearer than any other plan of industrial organization to solving our industrial difficulties, he is a firm believer in the necessity of competition for human beings as they are now constituted, but he wants this to be a competition of groups instead of individuals. His position on this group organization, and the farmer's part in it, can best be given in his own words:

I wish to say here that I wish to see labor equally divided, and comfort distributed according to desert, and, above all things, I favor organization of all classes to deal with all other classes, this being co-operation as opposed to socialism, whose end is the extinction of class. I therefore favor trusts, trade unions, business organization of farmers, banks and associations of banks, mercantile combinations, co-operative stores, co-operative loan associations, consolidation of transportation companies—anything which tends to stop bickering and bring together those of common interest whose representatives may deal and compromise with those of adverse interests, in the light of full information, and under a sense of responsibility, with the pledge of the whole that negotiations shall proceed decently and in order, and with the power of the whole interposed as a last resort. But as a farmer I object to a program involving as its first step an act of injustice to me, and having its ultimate end based on the fallacy that the interests of mankind are, or can become, identical, or that individuals and classes will ever cease to seek their own advantage as opposed to that of others, when as a matter of fact, human interests will always be diverse, and individuals and classes will always seek to accomplish their own ends. No one can deny this to be a just position for the farmer to take or that it has the support of farmers generally. Their numbers are and always will be sufficient to prevent reconstruction of society on irrational grounds, and their strong common sense, unimpaired by daily contact with enthusiasts, will not fail to detect the fallacies which lie at the bottom of socialism.

It would seem difficult to find a logical reason for group organization that would not apply with even more force to society organization. Indeed, the rivalries between individuals, under a competitive organization of industry would seem to be fiercer and harder to reconcile than the rivalries between groups. Stronger pressure on the individuals may render possible organization among them before society organization on a socialistic basis is possible, but it is hard to find justification other than on grounds of expediency, for a half-way position between individualism and socialism. The anarchist and the socialist are the logical men. Mr. Adams admits that socialism furnishes the grander ideal, but he believes that the niggardliness of nature or the laziness and selfishness of man makes the realization of this ideal impossible. One who believes that man's control over nature has reached the point where the product is sufficient to supply the reasonable wants of all does not see the need or the advantage of stopping at a half-way measure like co-operation.

WILLIAM HILL.

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*Die Socialdemokratischen Gewerkschaften in Deutschland seit dem Erlasse des Socialisten Gesetzes.* By DR. PHIL. JOSEF SCHMÖLE. *Zweiter Teil. Einzelne Organisationen. Erste Abteilung. Der Zimmererverband.* Jena: Gustav Fischer, 1898. 8vo. pp. vii + 300.

THE series to which this volume belongs is meant to present somewhat comprehensively the history of a number of representative trade organizations in Germany. The author's point of view in the work is admirable. He announces a purpose of exhibiting the chief motives which have led to the formation of trade unions, the forces which have held them together, and the ideals which they have set before them, as well as the centrifugal forces and the difficulties against which they have had to contend. In the present volume, referring to the carpenters, this purpose has been well realized, though the promised information as to the "ideals" is disappointingly scant—perhaps unavoidably so for want of space. One is inclined also to quarrel with the author's method in presenting his facts as somewhat too generally chronological rather than logical. The volume is chiefly a discussion of efforts by the leaders to control the varying optimism

or despair of the men, the growth among the members of intelligence as to their own power as an organization, troubles with the police and troubles between the extreme social democrats among the carpenters, and what would be called in America the "pure and simple" trade unionists.

The controversy regarding socialism is not unlike the dispute over the subject in many American unions. When the League of German Carpenters ("Verband Deutscher Zimmerleute") was established in the early eighties, it was designed by the principal leaders to avoid making it an organ for advancing the socialist cause. The socialists became aggressive; there was fierce debate, the socialists being charged with a desire to wreck the union, and in return charging their opponents with a lack of "class-consciousness," and with being willful deceivers of the workingmen in order to advance their own interests. The socialists failed to gain control, and so formed a new organization, the Free Union of Carpenters ("Freie Vereinigung der Zimmerer").

Among American trade unions, certain organizations or factions of a socialistic complexion have sometimes incurred a suspicion of lacking (as compared with their non-socialist fellow-workmen) those qualities of discipline and self-sacrifice so peculiarly essential to the success of their scheme. The sturdier elements, who might less improbably hope to maintain a co-operative commonwealth, are apparently those who refuse such a project. Dr. Schmöle makes a charge somewhat like this against the extreme socialists among the German carpenters. "The same men," he says, "who represent it as the simplest thing in the world to regulate from one central authority the entire production (or even the consumption) of an entire land, often strive with all their strength against being themselves subordinated to any but merely local control. They will at most acquiesce in the various forms of local organization. The worst example in this respect is exhibited by many of the trade unionists of some large places who invariably insist on following their own way instead of striving to be the supporters and champions of the whole organization." This impatience of restraint was shown in the constitution of the socialist union at its formation in 1887, by a secession from the *Verband*. The new organization was to have no authoritative central leadership. The local organizations were to devote themselves chiefly to socialist agitation. As a subordinate object they were to give assistance in strikes. The treasuries of the local unions were to



be supplied by merely voluntary offerings, and these funds were to be used chiefly for political agitation. So far as they were employed in strikes they were to be sent directly from the local unions to the assisted strikers. The general officers were to have no control over this money, and their function was that of an agitation committee. Failure of course attended this naïve dependence upon a sense of solidarity to give consistency and vigor to the system. The meeting at which the union was formed had been attended by only eleven persons, representing an inconsiderable body of constituents, and during the first year only two new local societies were formed. The collections yielded practically nothing. The police were aggressively hostile, though the absence of any ostensible connection between the local unions had been thought of as avoiding danger from the laws as to political societies. The non-socialist society meantime was, on the whole, comparatively prosperous. At its organization (in 1883) the payments by members were fixed at 50 pfennigs on initiation, and a monthly payment of 30 to 50 pfennigs, according to the wages received. When the general session took place in 1889, its membership was 10,500 in 131 local unions, of which 52 had been formed during the year. An increase of wages was interpreted as due to the assistance which it rendered in strikes. But when the good times came to an end, both organizations were ready for compromise. The socialist union was evidently a failure from the first. The non-socialists, humbled by the defeats which followed their brief successes, realized that they must convert the extremists from enemies to allies. They are said also to have admitted a superiority in the policy of their rivals so far as it meant the formal education of the workmen in a sense of "class solidarity." The two united, the non-socialistic organization practically absorbing the socialist. It is to be understood that the "Verband" has not at any time been anti-socialistic. Its members are said to be all socialists, yet they believe it to be the best policy, especially out of regard for the existing laws, to limit their organization to non-political functions.

This course seems to have been fairly successful in avoiding the penalties of the laws against socialists, but a second occasion for interference by government arose from the decision of the police that the union must submit to the regulations prescribed for insurance societies, as it gave aid to its members in times of unemployment during strikes or at other times, in return for regular payments. This

difficulty has been met by striking out from the constitution of the union those passages upon which the police and the courts based their decisions. It appears, also, that the courts have been growing more liberal on this point within a decade.

The great fact in the history of the carpenters' union (as in trade unions elsewhere) has been the growth of prudence and a healthy *esprit de corps*. The men have learned the folly of hasty strikes, and undue confidence in their power as an organization. Another instance is thus offered in exemplification of the fact which is the chief justification of all government and nearly all organization among men; leadership among great bodies of men tends to rest with those who are above the average in intelligence and character, while the mass, as a rule, learn to respect increasingly the advantage to themselves of wise leadership, and to accept more and more the policy of restraint and caution which the leaders are generally first to adopt.

A. P. WINSTON.

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*Grundriss des Gewerberechts und der Arbeiterversicherung.* (Grundriss des Oesterreichischen Rechts, Dritter Band, Fünfte Abtheilung.) By DR. VICTOR MATAJA. Leipzig: Duncker und Humblot. 8vo. pp. 137.

INDUSTRIAL legislation in Austria during the present century divides itself into periods at two cardinal points. In 1859 a compact and uniform code took the place of a mass of enactments which were fragmentary and full of local variations. At the same time the principle of free contract came to be distinctly recognized. For about a quarter of a century the *laissez faire* principle was predominant, and the government maintained an attitude of indifference to the conflict between workmen and employers; but about 1885 the current of legislation set strongly toward protection to the workmen. As a resultant of these two combined tendencies there is now in force a body of laws in general like those labor laws with which we are familiar in the United States, in which the general principle of free contract is tempered by the exercise of the police power. The legislative methods of the guild period are still perpetuated by another very different class of laws imposing upon the trade associations, in which membership by workmen and employers is compulsory, a variety of functions in

the regulation of the business of the trades which we should think of as exclusively governmental functions.

The compromise actually realized between free contract and the protection of workmen appears to correspond rather more nearly to the doctrine of our courts on this subject than to the principle which our legislatures have been trying to work out in such matters as truck and the legal limitations of hours of labor. As in this country the courts have been inclined to overrule anti-truck acts, the Austrian law permits the payment of wages in kind, unless there is a contract stipulating cash (though contracts to make purchases exclusively from particular stores are forbidden). Again, the Austrian law limits the employer's liability on account of accidents to cases in which positive negligence by the employer is proven. This evidently agrees with the earlier tendency of our law before the waning of the "fellow-servant" doctrine. With respect to that other standing subject of dispute between our courts and legislatures, a legal shortening of hours of labor, the Austrian law imposes so wide a limitation (eleven hours out of twenty-four in factories) that it would probably avoid the constitutional objection by which our courts have usually set aside eight-hour laws.

There are still evident occasional survivals from the "ancient régime," where, for example, it appears that entrance to the trades is not entirely free to all classes of persons.

The present volume is one part of a systematic presentation in condensed form of the whole body of Austrian law.

A. P. W.

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*Railway Co-operation. An Investigation of Railway Traffic Associations and a Discussion of the Degree and Form of Co-operation that should be Granted Competing Railways in the United States.*

By CHARLES S. LANGSTROTH and WILSON STILZ, with an introduction by MARTIN A. KNAPP, chairman of the Interstate Commerce Association. (Publications of the University of Pennsylvania, Series in Political Economy and Public Law, No. 15.) Published for the University. Philadelphia, 1899. 8vo. pp. xv + 210.

THE essays contained in this monograph were submitted in competition for a prize open to the members of the senior class of the

Wharton School of Finance. While the essay of Mr. Langstroth was awarded the prize, the essay of Mr. Stilz was considered of such merit that it has been published along with the prize essay.

The historical portion of each essay traverses the same ground. In each will be found an outline of the various steps in the railroad history of the United States connected with the co-operation of roads in regard to roads, rates, and traffic. The period reviewed extends from the age of beginnings down to the Joint Traffic Association.

The consideration of the forces underlying railroad competition and the indication of the limitations of competition, as applied to railroad enterprise, are set forth with greater clearness of statement in the essay of Mr. Langstroth than in that of Mr. Stilz. Mr. Stilz's style is marred by diffuseness. The presentation of the influence of locality on rates, contained in the essay of Mr. Langstroth, is a condensed piece of clear reasoning. Both authors show in their consideration of the local influences affecting rates the influence of the views of their instructor, Dr. Johnson. In stating that the desire of the railroads for combination is attributable to their belief that the effects of competition may thereby be avoided, Mr. Langstroth hardly does justice to the railroad position. The constant argument of the railroads has been that combination is necessary in order to escape the effects of *ruinous* competition. The author's own analysis shows that competition still exists under a pooling system.

The decision of the Supreme Court in the Joint Traffic case upset all the arrangements whereby the railroads were endeavoring to steady the condition of railroad business. At the same time the roads are forbidden to enter into pools. It is to the conclusion, then, of the authors, with reference to the method by which the difficulties of the existing system are to be met, that attention is to be devoted.

Both authors favor the legalization of the pooling system. Mr. Stilz recommends that pooling be legalized, the Interstate Commerce Commission being given power to fix maximum and minimum rates in pooling contracts, and to control the contents of the pooling contract. Subsidiary to this general recommendation he suggests that the power to fix through routes and rates, for which the commission has asked, be granted; that there be a uniform classification of freight; and that a railway-clearing house be established. Mr. Langstroth contents himself with recommending that the pooling contracts be subject to the approval of the commission, and that it should have

power to approve or reject these. This right is subject to an appeal from the decision of the commission to the Supreme Court. The commission is to maintain a constant oversight in regard to the pools, and if discriminations arise the pool offending is to be annulled.

While Mr. Langstroth's recommendation that there should be an appeal from the decision of the commission is justified by the fact that otherwise a dangerous power would be conferred upon the commission, it at the same time leaves a defect that would go far to neutralize the force of this proposed amendment. If there is no provision with reference to the finality of the testimony presented before the commission in such cases, then it will simply mean, as it does at present, that when the case comes up before the court on appeal, that the findings of the commission will go for naught. The recommendation of Mr. Stiltz that powers in regard to maximum and minimum rates should be in the hands of the commission is subject to criticism from the standpoint of expediency. A power to affix amendatory maximum and minimum rates, the railway being, so to speak, on its good behavior, would lessen the difficulties in connection with this phase of policy, while at the same time obtaining the end desired.

Both essays present thoughtful treatment of the central problem of the transportation question of today. Both are stimulating. The statement of Mr. Knapp that "they are a valuable contribution to railway literature, and will be read with interest and profit by all who desire accurate knowledge of railway history and correct views of railway regulation," will command the approval of those who acquaint themselves with them.

S. J. McLEAN.

UNIVERSITY OF ARKANSAS.

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*A Tabulation of the Factory Laws of European Countries, in so far as they relate to the Hours of Labor and to Special Legislation for Women, Young Persons, and Children.* By EMMA BROOKE.  
London: Grant Richards, 1898. 8vo. pp. 521.

THE tabulation is intended for three classes of persons—the expert, the student, and the so-called practical men and women of affairs—as a guide to facts. The laws of the following countries, regulating the employment in factories of women, children, and young persons, are tabulated and explained: France, Belgium, Holland; Germany,

Austria, Hungary ; Denmark, Sweden, Norway ; Russia, Italy, Spain ; Portugal, Switzerland (federal) St. Gall (cantonal) ; Great Britain and Ireland. The points tabulated are as follows : dates of earliest factory legislation ; dates of laws in force ; to what places the laws apply ; age of admission of children ; duration of working day ; concessions as to duration of work ; restrictions on night work ; concessions on night work ; compulsory holiday and Sunday rest ; restrictions as to mines and dangerous trades and excessive labor ; regulation of the hours of men's labor ; Sunday rest for men.

Although a small volume, it is much more than a handbook for reference. With the introduction and notes—conveniently grouped according to countries—as guides, the reader will find in the table a good cross-section view of European sentiment regarding the obligation of the state to protect women, young persons, and children against the economic system of the time. The author cautions the reader against too hasty conclusions from the tabulation. So well has she stated the warning that it should be applied to any study of factory or other legislation. The study of factory acts will be fruitless if taken apart from their context—the context being the conditions of the country to which they apply. Factory legislation must not be accepted as giving a bird's-eye view of the condition of the working classes in any country. A law may read well on paper, while failing to touch an extended portion of industrial oppression in the country. The sphere of influence of a law is not limited to that precisely defined by the law, for it may operate in a way not directly contemplated by the legislator. A law may overstep its own designed effect.

In legislation concerning the hours of labor a picturesque preconception of the thing itself and how it came about is apt to take possession of the mind. The popular assumption is that the protective arm of the law throws itself invariably in compassion over the child *first*, extends itself *next* to the weakness of the young person and the woman, and only finally finds an object in the man. A closer examination of the facts does not present this sequence as by any means invariable in *old countries*, even where modern legislation is concerned.

Two columns deserve special mention here : age of admission and duration of working day for children. In the French-speaking countries children are admitted at twelve, to work from ten to twelve hours a day. In the three German countries the age limit is one year higher, the maximum of hours from six to ten. The Scandinavian

countries require educational and medical qualifications at twelve, and six is the maximum number of hours. Children may work in factories at nine for eight hours a day in Italy; at ten for five hours a day in Spain; at twelve for eight hours a day in Russia.

A comparison of England's law with those of Russia and Spain is instructive, and may be humiliating:

	Russia	Spain	England
Age of admission of children	<p>12</p> <p>But if not possessing a certificate of education, must attend school for 18 hours a week up to 15 years of age.</p>	<p>10</p>	<p>11</p> <p>11, if an educational test is obtained. In factories a medical certificate is necessary under 16. Children of 11 to 13 years must attend school either twice on alternate days or once every day when working in the morning or afternoon brigades.</p>
Duration of working day	<p>8 hours in 24 for those under 15. Must not work more than 4 hours without rest. In certain industries may work for 6 consecutive hours, but then the working day must be 6 hours only.</p>	<p>5 hours for boys 10-13 years, and for girls 10-14. Education for 3 hours a day is compulsory up to these ages in state school.</p>	<p>In textiles, non-textiles and workshops the ordinary period is defined as between 6 a. m. and 6 p. m., or 7 a. m. and 7 p. m., or 8 a. m. and 8 p. m. Exceptionally the Secretary of State may alter the hours to between 9 a. m. and 9 p. m. Children of 11-14 on alternate days, or on the half-time system. Hours of alternate days are 10 with 2 hours rest.</p>

The book is one that will prove serviceable to secondary schools as well as to universities.

W. H. ALLEN.

PHILADELPHIA, PA.

*The Government of Municipalities.* By DORMAN B. EATON. New York: The Columbia University Press, 1899, 8vo. pp. x + 498 + 14 + 14.

WHILE Mr. Eaton's book will prove of deep interest to the political scientist and municipal reformer, the student of economics will doubtless find it somewhat disappointing. Aside from a four-page summary of some of the good work done by British cities, there is no discussion of public utilities. Franchises and municipal finance—subjects of such vital importance just now in America—are almost wholly ignored.

The work is mainly an elaboration of the thesis that the government of American cities is bad because it is party government. Tammany democracy is minutely described by way of illustration, while an account of the Greater New York charter is dragged in at the end of the book, apparently as an afterthought, to prove how serious a menace to the state party government in a great city may be. City government on the continent is somewhat superficially examined, and a careful study is made of the British system to show the practical workings of non-partisan city government.

Mr. Eaton's scheme of reform, which closely follows the British model, has as its main feature a powerful non-partisan council, a mayor with very limited powers elected by the council from its own body, non-partisan boards in charge of various branches of the administration, and civil service, or as he prefers to designate it the merit system, and labor registration, as the methods for selecting city employees. It is rather surprising that Mr. Eaton, who has devoted more than thirty years to the cause of civil service reform, and who has drafted such a practical and successful piece of legislation as the federal civil service act of 1883, avoids riding the merit system as a hobby. He lays much more stress on methods for securing a non-partisan council. He proposes a unicameral, continuous body, made up of four classes: (1) alderman elected from the city at large; (2) aldermen elected from a few large districts; (3) aldermen appointed by the council from public spirited citizens—men and women who have already served the city unofficially along some philanthropic or esthetic line, and (4) honorary aldermen, who serve without compensation or vote, also chosen by the council from ex-officers of the city. Free nomination and free voting in the choice of all these classes are expected to work wonders



in securing an able, really representative, and non-partisan body. It will surprise some Illinois reformers to find the election of members of the lower house of the Illinois legislature held up as the shining example of the system of free (or cumulative) voting. Professor Commons, in his work on proportional representation—a book frequently cited by Mr. Eaton—presents, as the result of a careful examination of the history of the last thirty years, by no means so rose-colored a view. While fully recognizing the advantages of a minority representation secured by the system, he finds that third party and non-partisan candidates are seldom elected; that in order to avoid waste and guess-work, party organization is strengthened; that there are frequent deals between party bosses; that where, as often happens, nomination is equivalent to election, the worst elements gain control, and that, in general, the quality and ability of the representatives is no better than under the old system. This testimony tends to confirm the impression that a mechanical device of this sort, unsupported by a high public sentiment, will fail as a panacea.

The autocratic mayor, by so many recent writers regarded as the chief hope of municipal reform, is to Mr. Eaton undemocratic, and the embodiment of all that is worst in partisan government. He regards the few much-cited cases of benevolent despotism as accidents, unfortunately made the most of by designing politicians and gullible would-be reformers.

Great confidence in the plans he proposes is undoubtedly to be expected from one whose past efforts at reform have been so generally successful. It is natural, too, that the book should show very clearly that the author writes from the standpoint of New York City. One wishes that a certain verbosity and tendency to frequent repetition were lacking; and that the work, which was written during a series of years, had been revised and brought up to date in all parts, so that the reader would not be compelled to translate "now"—1895, 1897, or 1899 in turn.

In these days of frequent experiment in municipal government, it would not be remarkable if a plan, clearly outlined by such an eminent authority as Mr. Eaton, were given a trial. Such a trial would be watched with great interest, and its success, even if far less complete than the author anticipates, would be the cause of sincere rejoicing.

ETHEL GLOVER HATFIELD.

CHICAGO.

*The Economic Foundations of Society.* By ACHILLE LORIA. Translated from the second French edition by LINDLEY M KEASBEY. New York: Charles Scribner's Sons, 1899. 8vo. pp. xii + 385.

THE second French edition of the *Economic Foundations of Society*, which Mr. Keasbey uses for his translation, is practically a new book. In response to a demand for a new French edition, Professor Loria rewrote and expanded what was originally an inaugural dissertation for the University of Sienna. Coming thirteen years later, it represents his more mature views.

This thesis is, briefly: all social relations are economic in their origin. Sociology can only assume a scientific character by recognizing this dependence. The most fundamental economic phenomena are those which arise under the condition of free land. Beginning with these, Professor Loria traces the evolution of society from a pre-capitalistic state to a future "final state," which will also be non-capitalistic. The intermediate state is divided into three periods, of which we are in the last; the slave economy, the serf economy, and the wage economy. Capitalistic property presupposes the exclusion of the masses from the soil. To do this two methods are employed: first, economic means, which the author does not analyze; second, the recourse to what he calls connective institutions, whose function seems to be that of police in keeping "hands off." These institutions are morality, law, and politics—"organic products of capitalistic property." A large part of the volume is devoted to the proof of this last point.

The book is one which will doubtless provoke considerable controversy. In spite of his modestly deprecating remarks in the preface, Mr. Keasbey seems to have succeeded well in preserving the clearness of style of the French edition.

KATHARINE BEMENT DAVIS.

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*The Commerce Clause of the Federal Constitution.* By E. PARMALEE PRENTICE and JOHN G. EGAN. Chicago: Callaghan & Co., 1898. 8vo. pp. lxxv + 386.

THE history of the Supreme Court of the United States is divided by Mr. Bryce into three periods with reference to the political

influences which have dominated it from time to time. The first period, which closes with the death of Marshall, was marked by a strong nationalistic tendency. In the second period, which closes with Taney's death, an opposite tendency prevailed, while in the third period, which embraces the history of the court since the Civil War, the national spirit is again prominent.

The history of the court is equally interesting when the character of the questions coming before it is considered. It is true that it has at all times been occupied with questions involving all phases of constitutional law, but the relative importance of the different questions as judged by the number of cases arising under them at a given period has varied greatly from time to time. Before the Civil War, the constitutional decisions of the court related chiefly to the relations between the federal government and the states, and to the constitutional limitations on the states. This is the period of *Chisholm v. Georgia* and *Cohens v. Virginia*, of *Fletcher v. Peck* and *Dartmouth College v. Woodward*, of *Craig v. Missouri*, *Briscoe v. The Bank of Kentucky*, and of the *Charles River Bridge Case*. Among the interpretations of the commerce clause made before the Civil War, only two (*Gibbons v. Ogden* and *Brown v. Maryland*), deserve to rank with the great decisions above mentioned. But since the Civil War, no clause, except possibly the Fourteenth Amendment, commands more attention. Its growing importance is well illustrated by the number of cases arising under it. Before 1840 the court had had to construe it in only five cases. In 1860 the number had increased to twenty; in 1870, it was thirty, in 1880, seventy-seven, in 1890, one hundred forty-eight, and at present it is at least two hundred thirteen. In other words, it is the application of the constitution to economic relations which now occupies the attention of the court.

The present work is a comprehensive treatment of the judicial interpretation of the commerce clause. The first chapter is devoted to the history of the clause and of the development of the accepted rule as to the exclusiveness of the commercial power of Congress—a rule which was first authoritatively laid down in *Cooley v. The Wardens of the Port*, although it had previously been formulated by Mr. Justice Woodbury in *The License Cases*. Then follow important chapters on definitions of commerce, distinction between domestic and interstate commerce, control of navigable waters, pilotage, port regulations, quarantine, inspection laws, and other local matters, regulation of carriers,

prohibition upon the states, taxation, regulation of freights and fares, regulation of corporate franchises, the federal legislative power, and relations with the Indian tribes.

The longest and in many respects the most important chapter of the volume is that upon Taxation. The question of the power to tax is at the bottom of many of the cases arising under the commerce clause. Taxation is the agency which the states have most frequently employed for the purpose of circumventing the power of Congress. The course of reasoning which led the states into this course is indicative of the difficulty of the question presented to the courts for determination, and it is little wonder that the decisions constantly conflict and make it almost impossible to deduce positive rules. The authors of the present volume have made a diligent study of the cases, and treat the subject from both the historical and the logical standpoint. If they do not speak with certainty as to the law, the fault lies less in them than in the conflicting decisions of the courts.

All in all the volume must prove a very useful treatise to all who are called upon to consider the commerce clause of the constitution. In logical arrangement, in amplitude of citation, in accuracy, and in scholarly appreciation of the subject, it leaves little to be desired.

CARL EVANS BOYD.

CORNELL COLLEGE.

APPENDIX  
TABLE RELATING TO THE FOREIGN TRADE OF THE UNITED STATES  
IMPORTS AND EXPORTS OF GOLD AND SILVER FROM 1821 TO 1830  
(in thousands of dollars.)

	1821		1822		1823		1824		1825		1826		1827		1828		1829		1830	
	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.
England	648	1,034	108	796	366	312	151	312	86	303	122	698	35	200	21	2,852	40	614	144	122
Gibraltar	603	32	54	5	122	4	311	2	102	126	95	11	89	3	37	36	59	11	8	60
France	865	12	95	520	139	125	177	125	25	937	104	204	1,065	50	50	2,457	29	1,603	62	146
Europe gen.	9,265		460	174	609	71	756	7	158	58	315	204	270	51	265	77	70	111	122	29
Europe	4,381	1,078	717	1,495	1,220	618	1,343	321	1,444	58	726	913	1,819	382	5,422	198	2,139	336	367	
Danish W. Indies	310	15	178	15	342	15	222	112	156	57	157	2	269	47	175	65	155	61	247	22
British " "	801	175	27	5	521	2	828	12	638	8	619	8	313	4	35	3	12	5	27	2
French " "	36	60	29	29	95	103	169	51	100	8	126	409	223	87	260	3	266	288	267	2
Havre	964	265	590	222	30	353	103	32	61	21	127	2	47	876	779	22	46	32	276	
Cuba	1,103	265	290	27	276	21	117	8	545	128	411	5	205	8	579	787	364	532	302	25
Other W. Indies	412	374	290	27	166	21	117	8	118	11	135	5	205	8	202	13	200	32	293	25
West Indies	3,226	374	1,449	273	1,452	593	2,624	445	1,678	245	1,615	426	1,530	935	1,267	890	1,190	638	1,269	325
South America	149	212	733	155	1,097	009	3,893	89	1,041	212	1,302	183	1,602	112	1,678	124	1,222	77	1,452	1
Dutch E. Indies	1,258	1,285	8	878	940	283	420	25	670	273	273	273	273	273	273	273	273	273	273	273
British	3,301	1,285	9	1,030	22	283	782	25	666	273	273	273	273	273	273	273	273	273	273	273
China	1,345	9	23	945	32	368	4,464	44	4,523	82	1,652	366	366	366	366	366	366	366	366	366
Asia generally	43	9	23	4	32	9	6,371	9	735	17	32	17	71	26	39	263	7	122	20	53
Atlantic Islands	89	128	128	222	222	222	303	6	222	222	222	222	222	222	222	222	222	222	222	222
Mexico	81	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Canada	69	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Central America	21	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Africa	21	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Miscellaneous	69	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Totals	8,028	10,473	3,370	10,811	5,098	6,373	8,380	7,015	6,511	8,797	6,221	4,705	8,131	8,015	7,429	8,443	7,404	4,926	8,156	2,179

\$87,000 of this total came from Florida. \$4,000 of this total went to Florida.

# THE JOURNAL OF POLITICAL ECONOMY

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MARCH—1900

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## THE GENERAL SAVINGS AND OLD-AGE PENSION BANK OF BELGIUM.

THE time is not very remote when the idea that the working-man could not only satisfy his immediate wants but make some provision for the future was scarcely entertained. At the present time it is not going too far to say that much of the best efforts now being put forth for the improvement of the welfare of the working classes has this object in view.

The present century, and particularly its last half, has seen the creation and rapid development of provident institutions of all sorts. The movement for workingmen's insurance has swept over Europe, resulting in the enormous extension, either under the auspices of the state or through voluntary efforts of this form of provision for the future. Raiffeisen, Schulze-Delitzsch, people's banks, co-operative credit, and kindred institutions, have been organized in great numbers throughout Europe. Savings banks, so organized as to appeal directly to the poorer classes, have progressed with remarkable rapidity.

In this movement the state has felt compelled to play a part. In addition to assuming a more or less strict regulative control

over privately organized institutions, most of the important European nations have supplemented these efforts by themselves creating general savings banks, for the most part organized under, and administered by, their postal departments. Among these the Belgian bank is pre-eminently worthy of attention. As M. de Foville in his report on Savings Banks for the Paris Exposition of 1889 says, this bank is an institution *sui generis*. Its peculiarity and feature of importance consists in the fact that not only is it one of the oldest and most prosperous of state savings banks, but that it has gradually taken to itself other functions until it has become a great central institution ministering to the financial wants of the poorer classes in a great variety of ways. It is thus, at the present time, a general savings bank; it furnishes a system of old-age and invalidity insurance; it is the central agent in granting credit to the farming classes and certain co-operative associations of workingmen; it provides life insurance, and is the institution furnishing the funds for societies which are now doing so much for the provision of improved houses for the working classes. This enumeration shows the important part that it is playing in the movement for social reform in the country. In the study of its multifarious operations there is therefore offered the opportunity of examining in the most direct way the practical efforts now being made in various directions for the improvement of the condition of the laboring classes in Belgium, and the important results that are being accomplished.

The general outline of the history of this institution can be briefly given. Oddly enough the branch relating to the provision of old-age and invalidity pensions was the first to be created. The origin of the bank is found in the law of May 8, 1850, which created a *caisse générale de retraite*. Fifteen years later, by the law of March 16, 1865, a general savings bank was created and joined to it. Since then these two services have constituted separate branches of a single institution under the name of *Caisse générale d'épargne et de retraite*. No further change as regards the field of its operations was made until 1884,

when a law promulgated, April 15 of that year, authorized the bank to employ a part of its funds in loans to farmers or agricultural societies. A new law, enacted June 21, 1894, extended this service by authorizing the loan of money in a somewhat similar way to farmers' co-operative credit societies. Prior to this last act a still further extension of the activities of the bank was decreed by the act of August 9, 1889, which gave to the bank the very important power of loaning money to societies having for their purpose the erection or renting of sanitary and cheap houses for the working classes. Finally by the law of June 21, 1894, the bank was authorized to create a life insurance department.

That we may gain a clear idea of the character of this institution it is desirable to describe separately the work performed by it in each of its various capacities. Fortunately for the investigator, as well as for the efficiency of the management of the bank, the accounts of the different operations are kept rigidly distinct, and it thus becomes an easy matter to study the results achieved by each service.

*Savings department.*—Though not the first created, the savings department constitutes the central feature of the institution and logically requires first consideration. The savings bank proper, as has been stated, was organized by virtue of the law of March 16, 1865. Though similar in general purpose to the postal savings banks of other European countries, this institution yet possesses features differentiating it radically from these banks. In the first place, though making use of the post offices for its local branches, it cannot, strictly speaking, be called a postal savings bank. It is not placed under the administration of the department of posts and telegraphs, and in fact it was not until four years after its creation, or in 1869, that the use of the post offices as sub-stations was permitted to it. In addition to the use of these offices it also makes use, in a similar way, of the local branches of the national bank and the various registration bureaus. The postal system thus plays no part in the bank other than that use is made of its offices as local branches of the bank.



As far as possible the bank has been given an independent organization. The administration of its affairs is entrusted to a general council composed of twenty-five members appointed by the king. This body has only a general oversight of the operations of the bank. From among its members the king appoints an administrative council of six members and a chief executive or general director in whose hands is placed the actual administration of the bank's business.

The provisions in regard to the making of deposits, the rate of interest allowed, etc., are as follows: According to the law of 1865 single deposits were required to be of at least one franc in amount. In 1881, however, the use of savings slips (*bulletins d'épargne*) were authorized, on which depositors could affix special stamps to the total value of one franc, when they were accepted as deposits of that amount. The special purpose of this device was to encourage saving among the school children. No limit was placed upon the amount of deposits that could be made either at a single time or to the credit of a single account. This is a marked and fundamental departure from the policy pursued by France and other nations in their state savings banks.

The objection to large deposits is that an undue use is thus made of the bank for investment purposes by the wealthier classes; that money in this way is withdrawn from private enterprise which should be in active use through the ordinary banking institutions, and that the security of the bank is endangered in times of crisis by the sudden withdrawal of large sums. To guard against this the usual practice has been to limit the amount that can be deposited at one time or to the credit of the same account. Belgium, it would seem to us, has pursued a much better system in protecting itself against these dangers.

Security against a panic is obtained by the requirement of a notice of six months for the withdrawal of sums of over 3000 francs, of two months for sums from 1000 to 3000 francs, of one month for those from 500 to 1000 francs, and of fifteen days for those from 100 to 500 francs. Sums less than 100 francs can be

withdrawn without prior notice, with the condition, that this privilege cannot be exercised more than once in the same month. It is of course optional with the bank to dispense with this requirement of notice. In the second place the bank can, after due notice, reduce any account to 3000 francs by returning the surplus or investing it for the benefit of the owner in state bonds. Finally, and most effective of all, the rate of interest allowed on large deposits is, as will be seen in the next paragraph, lower than that given on small accounts.

The law of 1865 very properly, instead of itself fixing the rate of interest to be paid on deposits, left its determination to the general council with the authority to change the rate from time to time as necessitated by the productiveness of the bank. In practice the rate has been maintained at the uniform figure of 3 per cent. Interest is calculated and added to the principal on December 31st of each year. The 3 per cent. rate at first applied to all accounts no matter what their amount. In 1881, however, the administration, while maintaining the rate on sums of 20,000 francs and less, reduced the rate to 2 per cent. for any surplus over this amount. In 1886 this limit was lowered so that the 2 per cent. rate applied to the surplus over 5000 francs, and in 1894 still further to the surplus over 3000 francs.

In making this distinction between large and small accounts an important exception is made in the case of the deposits of mutual aid and farmers' co-operative credit societies. For these organizations 3 per cent. is allowed on all of their deposits. In case such accounts exceed 20,000 francs, however, the bank has the privilege of converting the excess over this amount into public bonds for the benefit of their owners. This exception in the case of these two classes of societies, it should be observed, works to the mutual advantage of both parties. It is a source of income to the bank as the expenses of administration of large accounts are relatively small, and at the same time the societies have a safe custodian of their funds and realize a very fair rate of interest on such funds as they have to keep on hand to meet current demands.

From the moment of its creation in 1865 the bank has constantly advanced in regard to the extent of its operations. The following table, in which are given the most important figures concerning the number of depositors, the amount of deposits, etc., shows how steady has been this progress and especially its rapidity during recent years :

Year	Number of accounts	Amount on deposit Dec. 31 (francs)	Average value of accounts (francs)
1865 .....	803	529,632	656
1870 .....	52,346	19,620,727	375
1875 .....	106,312	44,857,001	422
1880 .....	200,565	125,098,287	624
1885 .....	444,087	189,061,089	426
1890 .....	731,057	325,415,412	445
1891 .....	800,074	333,428,732	417
1892 .....	869,947	351,308,338	404
1893 .....	960,468	390,181,775	406
1894 .....	1,053,699	427,317,065	406
1895 .....	1,145,408	453,429,304	396
1896 .....	1,238,601	481,160,337	388
1897 .....	1,377,643	532,081,819	386
1898 .....	1,514,810	564,829,271	373

This table, when one takes into consideration the smallness of the population of Belgium, furnishes a really remarkable exhibit of the extent to which economy is practiced by the masses in that kingdom. In 1885 there were 7.5 accounts for every 100 of the population of the country; in 1890, 11.8 accounts; in 1895, 17.9; and in 1898, 22.9, a showing that would almost indicate one account for every family. This proportion, moreover, as can be seen is constantly rising. The number of persons having accounts is increasing at the rate of one hundred thousand or more yearly and the amount of their deposits by from 25 to 50 million francs.

In the face of these figures it is a matter of vital importance to determine the character of the people making use of the bank. The purpose of a state savings bank is to furnish facilities for the saving of small sums which otherwise would in all likelihood be dissipated by their owners. The moment that it goes beyond this and attracts to itself sums of money which would

have been deposited with other financial institutions, or invested in industrial or commercial enterprises, instead of proving a benefit to the country, it is productive of positive evil. In aggregating the small savings it creates capital. In receiving large deposits, while it does not exactly lessen capital, it lessens its energy and effective utilization; and at the same time tends to diminish the very essence of progress, the industrial enterprise of the people.

These considerations have been fully appreciated by the administrators of the Belgian bank and there is every reason to believe that the enormous increase in savings shown by the table represents a true increase in savings on the part of the wage earning classes. The last column shows that the average value of the accounts is steadily diminishing. It will be remembered that in pursuance of the recent action of the managers of the bank but 2 per cent. interest is now paid on deposits in excess of 3000 francs. This has had the effect of decreasing the number of large accounts. In 1894, 2.3 per cent. of the accounts were for sums over this amount as against 1.2 per cent. in 1898. In the latter year, 42.2 per cent. of the accounts had to their credit less than 20 francs, 19.4 per cent. from 20 to 100 francs, 18.7 per cent. from 100 to 500 francs, 6.9 per cent. from 500 to 1000, 6.9 per cent. from 1000 to 2000 francs, and 4.9 per cent. from 2000 to 3000 francs.

As regards the occupations of depositors, the records of the bank show that there is no doubt that it accomplishes its object of limiting its operations chiefly to the laboring classes. Thus the report for 1898 shows that of 86,136 new accounts opened by adults examined for this purpose 32,847 were made by employees in manufactures, mining, or trade, 13,615 by day and farm laborers, and 8491 by domestics, or a total of 54,953 by the working class proper. Of the remaining 31,183, 15,311 were by housekeepers and persons exercising no profession, the greater number undoubtedly belonging to the class of housekeepers, as 12,854 of this class were females; 6102 by officials and clerks, 965 by teachers, 593 by others exercising a liberal profession, and 817 by proprietors of establishments.

During this year, and not included in the above figures, 124,352 new accounts were opened to the credit of minors. This large number is due to the great extent to which savings by school children has been developed in Belgium. It is a very general practice to give accounts at the savings bank as prizes to the students, and, within recent years, a movement has gained considerable headway for providing, partly at the expense of the commune or city and partly through private philanthropy, every child when born with an account at the bank of one franc with the hope that the parents will continue to make additional deposits for the child's benefit.

In determining the rate of interest to be allowed upon deposits by a state savings bank, the guiding principle should be that the bank should at all hazards be self-supporting. Thanks to the great choice in kinds of investments allowed to the administrators of the bank, the Belgian institution has, during its over thirty years of existence, not only been able to pay all of its operating expenses and 3 per cent. interest on deposits, but has besides accumulated a considerable reserve fund, and since its organization distributed quinquennially a dividend among its depositors. This work has been accomplished absolutely without sacrifice on the part of the state.

This result has been due not only to the skill with which investments have been made, but to the fact that a positive source of profit is found in a number of the operations carried on by the bank. The fact has already been mentioned that the large deposits of mutual aid and farmers' co-operative credit societies give to the bank a considerable sum of money upon which it can earn more than 3 per cent. at but slight cost for administration. The law also provides that such public institutions as hospitals and bureaus of charity, and the provinces, communes, and cities may make use of the bank and its branches for the care of their moneys. That part of these funds which is in the nature of a permanent investment, and therefore not subject to immediate call, earns the regular rate of 3 per cent. The greater part of these deposits, however, consists of the money

which these bodies are obliged to keep on hand to meet current expenses. Upon this but  $1\frac{1}{2}$  per cent. interest is paid. The bank has in this way a sum amounting to several million francs upon which it can earn a considerably higher rate of interest than it pays.

The bank is also enabled to make a net profit in several other ways. The payment of only 2 per cent. on the excess of deposits of individuals over 3000 francs leaves a margin for earnings on these sums. All accounts, moreover, concerning which no transaction has been had for thirty years are considered as abandoned and become the property of the bank. As the bank has now been in existence over thirty years it receives more or less in this way every year.

The excellent financial condition of the bank is shown by the following figures taken from the last annual report for the year ending December 31, 1898:<sup>1</sup> The gross earnings during the year were 17,674,914.54 francs. From this sum 15,814,783.51 francs was paid in interest, 1,091,225.95 francs went for operating expenses, and 214,974.90 francs for amortization, leaving a surplus of 553,930.18 francs which was carried to the reserve fund, which, with this addition, amounted on December 31 to 11,911,175.77 francs. This fund would have been two or three times this amount but for the system already alluded to by which a portion of the profits are divided every five years among the depositors.

The method and form of investment of the funds of a savings bank undoubtedly constitute the most important feature of its organization. The policy pursued in this respect determines the whole character of the institution. It is in this feature that the Belgium bank is unique among state savings institutions, and the reason why it merits the special interest and investigation on the part of the student of social institutions.

The French and other postal savings banks, as is well known, are required to invest all of their funds in bonds of the state or

<sup>1</sup> *Compte rendu des opérations et de la situation de la caisse générale d'épargne et de retraite, instituée par la loi du 16 Mars 1865, sous la garantie de l'état. Année 1898 (Brussels, 1899).*

those enjoying a state guarantee. The result of this policy has been not only to decrease the earnings of the banks and therefore the rate of interest that they can afford to pay upon deposits, but to constitute a grave embarrassment and danger through the facility thus afforded to the state to borrow, and the enormous and rapidly increasing indebtedness the state is assuming toward the people. The government practically borrows from the people hundreds of millions of francs, the repayment of all of which may be demanded within a very short period of time. If, in case of a crisis, such a demand were made, the money could only be had by the savings bank selling the bonds in open market at a time when they would not produce anywhere near the amount given for them. An almost equal disadvantage of the exclusive investment of deposits in government securities lies in the withdrawal from circulation and the rendering inactive of large sums of money which should be invested in private capitalistic enterprises.

The Belgian legislators have succeeded in avoiding these dangers by boldly giving a far greater freedom than is usual to the administrators of the bank in the selection of the means of investing the bank's funds. The act of 1865 provided that the funds of the bank might be invested, not only in state bonds, but in the securities of the provinces, communes, and cities, in the obligations of Belgian companies, which for the five years immediately preceding had met all their engagements by means of their ordinary receipts, in loans on notes and real estate mortgages, and finally in the discount of bills of exchange and similar paper, and in the purchase of foreign state bonds. In fact, the bank is allowed to use a portion of its funds in most of the transactions permitted to ordinary commercial banks.

The provisions of the law of 1865, while giving great latitude in the matter of investments, have no other purpose in view than the safe and productive employment of the deposits. Beginning with the act of 1884, authorizing loans to the farming classes, an entirely new principle was introduced in the policy

of the institution, that by which the object sought in the investment of the funds was primarily the assistance of a social movement directed to the improvement of the condition of the laboring classes.

It is well recognized that the loan service of the ordinary commercial bank is of equal importance to that of its serving as the custodian of money, and there seemed to be no reason why this sphere of usefulness should be denied to a state bank. The General Savings Bank is a purely social institution for the benefit of the poorer classes. What more logical and suitable use could be made of the money coming from the people than in co-operating in the various movements for the improvement of their economic condition, the extent of whose operations could be greatly extended if more funds were placed at their disposal. The Belgian bank deserves the great credit of first recognizing this fact, and appreciating that its sphere of usefulness lay as much in the use of the money coming into its possession as in the mere act of facilitating its accumulation.

The experiment inaugurated in 1884 proving successful was subsequently extended in 1894, and in 1889 the still more important action was taken of permitting the loan of money to societies having for their object the provision of cheap and sanitary homes for the working classes. The character of the work done in this way is so peculiar and of such importance as to require a special description. Before doing so, however, the following statement, taken from the report of the bank for 1898, is given, in order to show the nature of the investments of all kinds of the bank at that date, and the relative importance of each class. In this statement the figures are given in round thousands of francs, as given in a recapitulation table of the official report.



Character of Investments	1893	1894	1895	1896	1897	1898
	In thousands of francs					
State bonds.....	150,092	157,220	158,706	152,485	176,417	188,514
Obligations of companies guaranteed by the state.....	24,297	23,668	23,316	34,291	34,307	34,252
Obligations of provinces and communes.....	38,246	46,023	54,154	62,444	69,595	76,099
Obligations of private companies.....	65,908	69,844	80,390	86,534	94,443	102,224
Loans on collateral.....	15,950	18,867	27,542	28,105	25,639	42,931
Loans on real estate mortgages.....	3,707	5,355	4,689	3,856	1,789	2,154
Discount of domestic paper....	27,157	29,545	36,691	43,539	45,719	48,078
Discount of foreign paper.....	67,742	80,951	67,515	70,913	74,575	61,226
Agricultural loans.....	2,104	2,320	2,518	2,922	3,949	4,470
Loans for workmen's houses.....	5,346	8,350	11,789	15,477	19,950	25,363

This table presents a very interesting exposition of this part of the bank's operations, for in it can be traced the gradual change that is taking place in the policy of the institution. In 1898 the funds of the bank invested in government bonds represented but 32.22 per cent. of its total investments, as against 37.47 per cent. in 1893; that in securities guaranteed by the state also decreased, though but slightly, being 5.85 per cent. in 1898 and 6.07 in 1893. The amount invested in the bonds of the communes and provinces has steadily increased. In 1893 this form of investment represented 9.55 per cent. of the total, and in 1898, 13 per cent. A similar gradual increase is seen in the investment made in the obligations of private Belgian companies, the percentage for this class increasing from 16.45 in 1893 to 17.46 in 1898. Ten years preceding this last date, or in 1888, such investments represented but 6.63 per cent. of the total. The relative importance of the discount operations and loans on collateral or real estate has remained about the same during the period covered by the table. If a period of ten years be considered, however, a substantial decline in their importance can be seen. Together, these four classes represented, in 1888, 34.11 per cent. of the total investments, as against but 26.38 per cent. in 1898. The most interesting showing is that of the steady increase in the extent to which the bank

is investing its resources in the social undertakings of farmers' loans and for the construction of workingmen's houses. For the former the increase, though constant, has been slow, the change being from 0.53 per cent. in 1893 to 0.76 per cent. in 1898. In the case of loans for workingmen's houses, however, the amount so invested has increased nearly fivefold during the six years, and in 1898 represented the important sum of 25,363,000 francs. This figure represents 4.33 per cent. of all investments, the percentage for 1893 being but 1.33. To recapitulate therefore, the significant features of the bank's policy brought out by this table are that less and less dependence is being placed upon government securities for investment purposes, and that their place is being taken by the obligations of private companies of proved financial stability, and by loans to the farming classes, and particularly to societies for the construction of workingmen's houses.

From a consideration of the general operations of the savings bank, we now pass to a more particular examination of those two special features having for their purpose the assistance of social movements, which, as we have seen, are constantly playing a more important part in the bank's operations.

*Loans for workingmen's houses.*—The study of the question of workingmen's houses in Belgium led to the belief there, as elsewhere, that the principles upon which action should be attempted were: first, to render the workingmen owners of their own homes, and secondly, to make them achieve this result as far as possible through their own efforts. To do this, however, a machinery—some means by which the money for building could be secured—was necessary. In the United States and in Great Britain admirable institutions for this purpose have been developed in the building and loan associations and building societies of these countries. It was readily seen that if feasible the best action that could be taken was to strive for the development of similar institutions in Belgium. Unfortunately, the economic condition and character of the Belgium workingman was such that the spontaneous development of such societies in Belgium

could not be anticipated. Not only is the capacity for organization of the Belgian workingman less than that of English or American laborers, but the regular contributions possible to these were beyond his resources. Assistance of some sort, therefore, was necessary.

This was sought and found in the co-operation of the general savings bank. The law of 1889, which was passed at the demand of those who had for years given the subject the closest attention, thus in its general aspects provides for the encouragement of the organization of building societies after the British and American pattern by permitting the general savings bank to make loans to them on very advantageous terms as regards the rate of interest demanded and the facilities of repayment in small instalments.<sup>1</sup> The system thus created is in fact much the same as where our own building associations cannot secure sufficient funds for their operations through the contributions of their members and borrow from banks or other institutions.

The law of 1889 relates to a good deal more than the participation of the General Savings Bank, but it is difficult to give an account of the rôle played by that institution without giving at least a brief description of all of its general features. The law may be said to embrace three fairly distinct parts, those relating to: first, the creation of local committees of propaganda, or patronage, as they are called; second, the regulation of the conditions under which money is loaned by the bank for building workingmen's houses; and third, the institution of a system of life insurance in connection with the loan, so that in case of the death of a workingman while in the course of paying for a house, the insurance money will liquidate the balance of his indebtedness.

The creation of committees of patronage was necessary, as there was little likelihood that the workingmen themselves would take the initiative to any sufficient extent. These committees

<sup>1</sup> This law was afterwards supplemented by the law of July 30, 1892, the purpose of which was to extend to loan societies certain fiscal advantages until then enjoyed only by the building societies proper.

are organized by the local governments in the different communes and provinces, and consist of public-spirited individuals who are interested in social questions or are competent to pass upon the technical problems relating to building and hygiene. Members serve without pay. The duties of these committees are to determine the needs of their districts, and particularly to bring about the organization of companies either by capitalists or by the workingmen themselves for the construction of workingmen's houses.

It is with the second and third features of the law, however, or those relating to the action of the general savings bank, that we are here most interested. The essential feature of the system under which money is lent by the bank for workingmen's homes is that it is never lent directly to the workingmen, but is advanced to a society which stands as an intermediary between the bank and the actual beneficiaries. The system thus contemplates the creation of four kinds of societies—joint-stock and co-operative building societies, and joint-stock and co-operative loan societies. The distinction between these different societies is sufficiently shown by their names. The loan societies are similar in purpose to our building and loan associations, in that they do no building, but merely lend money to workingmen for this purpose; while the building societies themselves construct buildings either for rent or sale to workingmen. The difference between the joint-stock and co-operative form of organization is that the former are organized by public-spirited individuals, while the latter are due to the workingmen's own efforts. All comprehend the repayment of any advances made on the installment plan.

These different forms of organization are necessary in order to meet the requirements of different conditions, and their distinctions must be borne in mind, because a somewhat different system of making loans to them has to be adopted by the bank in each case. To joint-stock societies the law permits the lending of money to the extent of one half their capital stock subscribed and not paid in, three fifths of the value of the real estate security held by them for loans they have made to

workingmen, and, in case they are building societies, one half of the value of the property owned by them. Advances to the same extent can be made to co-operative societies, with the exception that no advance can be made on account of unpaid stock. The capital of co-operative societies consisting only of the money accumulated in small installments or dues does not offer sufficient guaranties for the security of loans in respect to it.

To make this system clear, let us take the example of a joint-stock loan company with a capital of \$100,000. Under the general law relating to joint-stock companies, 10 per cent. of the capital stock, or \$10,000 must be paid in. The general savings bank then advances an amount equal to one half the unpaid stock, or \$45,000. The company thus has immediately available \$55,000 for loaning to workingmen. Let us suppose that this sum is loaned for the erection of \$1000 houses. Under the law the borrowers must themselves furnish one tenth of the money required, or in each case \$100. The company thus lends but \$900 to each borrower, and is therefore able to make 61 loans, leaving a small balance in its possession. As fast as these transactions are concluded the general savings bank will make additional advances equal to three fifths of the value of the property, or \$600 in each case and \$36,600 altogether. These sums are again lent out together with the money received through the regular installments and interest paid by the borrowers; and so the operations of the company continue indefinitely, the security of the savings bank remaining always proportionately great.

The general rate of interest charged by the bank on its loans to the societies is fixed at 3 per cent. It is specially provided, however, that in case of joint-stock loan companies which voluntarily limit their dividends to 3 per cent. and thus have partly the character of philanthropic organizations, the rate is reduced to  $2\frac{1}{2}$  per cent.<sup>2</sup> The rate of interest charged by the companies

<sup>2</sup>In 1892 the further condition was imposed that they should require all workingmen borrowing from them to contract life insurance with the bank.

on their loans to workingmen, however, is usually at the rate of 4 per cent., a slight increase being necessary in order to meet the expenses of operation.

Though the law authorizing this system was enacted in 1889, it was not until 1891 that the decree establishing the particular conditions under which it would be administered was published, and the system went into actual operation. From the time when work actually began, however, complete success has been achieved, and, as was shown in the table giving the form of investment of the funds of the bank during recent years, the extent of operations under the law is constantly increasing. The number of companies of each kind which had obtained loans from the bank and the amount of their loans on December 31, 1898, are shown in the following statement :

	Number	Amount of loans
Joint-stock loan companies - - - - -	86	22,340,050.00
Joint-stock building companies - - - - -	25	1,052,427.50
Co-operative loan companies - - - - -	8	1,708,439.98
Co-operative building companies - - - - -	1	24,500.00
<b>Total - - - - -</b>	<b>120</b>	<b>25,125,417.48</b>

From this statement it will be seen that the general savings bank had outstanding on December 31, 1898, loans of over 25 million francs to companies whose exclusive work was the provision of workingmen's houses.

One of the most significant points brought out, however, is the comparatively slight extent of the work of co-operative societies. This is a demonstration of the necessity that existed for the assistance of the workingmen through the organization of societies by the wealthier classes. The education of a people in such matters as this is slow ; as time goes on, greater dependence can possibly be placed on the workingmen themselves. It is to be remarked, however, that the joint-stock companies have almost exclusively been organized for philanthropic purposes. Of the total amount borrowed from the bank, 23,515,040 francs was at  $2\frac{1}{2}$  per cent., thus showing that most of the

companies had limited their maximum dividends to 3 per cent.

We now turn to the third, and, in some respects, most interesting feature of the system created by the law of 1889, that whereby workmen who are acquiring houses through the system of partial payments, at the same time insure their lives in the general savings bank for the balance of the purchase price that may be due if they die before their houses are fully paid for. The purpose of this operation is obvious. A great hardship involved in the practice of buying a house through installments running a considerable number of years is the danger that the purchaser may die before the final payment is made, the result often being that the house must be sold to save the lender from loss, thus leaving the workingman's family unprovided for.

The system here inaugurated completely guards against this contingency. The law provides that there shall be created in the general savings bank a special service through which purchasers of houses from companies affiliated with the bank can at the time of making their contract, insure themselves against the contingency of their death occurring before their houses are paid for. This is done in the following way. When undertaking to acquire a house, the purchaser takes out with the general savings bank an endowment policy for the value of his loan to run for the period of time that installments must be paid for the purchase of the house. Thus, under the general scheme of an endowment policy, the bank will pay at the end of the period or upon the death of the insured, if it occurs before that time, a sum equal to the amount borrowed by the workingman from the loan or building company. To the premium required by this policy must be added the 4 per cent. interest paid to the loan company for the money advanced by it in order to ascertain the total installments required from the purchaser.

Published tables show exactly the amount of annual payments required under contracts of this kind running for 10, 15, 20, and 25 years. In separate columns are shown for each age from 21

to 55 years, the amount of the insurance premium, the amounts of the installment payments, with and without insurance, and the net cost of the insurance. These tables, though interesting, are too lengthy to be reproduced. The following explanation, however, will make clear their construction and use.

It is desired to find the annual payments required of a workingman purchasing a house through installments running a period of 10 years, the total obligation incurred being \$1000, according to whether life insurance is taken out or not. According to general insurance principles, the premium required on an endowment policy of \$1000 running 10 years is from \$91.83 to \$102.20, according to the age of the insured. Under this policy there will be paid by the general savings bank at the end of 10 years or on the death of the insured \$1000, the exact sum required to liquidate the loan contracted by him in order to purchase his house. In the meantime, however, he has borrowed the \$1000 from the loan company to pay for the house. Upon this he must pay 4 per cent. interest, or \$40 a year. His total payments under this arrangement are thus from \$131.83 to \$142.20, according to his age.

If no insurance is contracted the annual installments required to meet the interest and liquidation of the principal in 10 years are \$123.29. Subtracting this from the total payments required under the insurance system, it will be seen that the actual cost of the insurance is but the small sum of \$8.54 for men 21 years of age, but naturally increasing with the age of the borrowers, amounting to \$18.91 for those 55 years old. It should be remembered that under either of these arrangements the purchaser enters into immediate possession of his house, and therefore has no rent to pay. The advantages of the insurance scheme are so manifest that it has been almost exclusively selected. This is seen from the following statement showing the number of loans made to workingmen outstanding each year since the inauguration of the system, and the number with insurance.



Year	Number of loans	Number with insurance	Year	Number of loans	Number with insurance
1891.....	52	11	1895.....	4,360	3,443
1892.....	753	473	1896.....	6,110	4,914
1893.....	1,764	1,364	1897.....	8,078	6,560
1894.....	2,921	2,306	1898.....	10,712	8,601

In concluding this necessarily lengthy account of this branch of the operations of the general savings bank, one cannot refrain from expressing admiration for the ingenuity and skill with which the details of the system were worked out to meet the peculiar conditions and characteristics of the Belgian workmen. The committees of propaganda take account of the lack of initiative among the workingmen and prevent the law from remaining a dead letter. They at the same time act as boards of information to the savings bank in regard to the standing and management of the societies wishing to obtain loans from it. Secondly, the policy of dealing only with companies acting as intermediaries between the bank and the workingmen, not only increased the security of the bank and shifted the great burden of looking after the details of loaning the money to workingmen, its repayment in small installments, and the like, but left the real work of providing and operating the machinery of building and loan societies to private initiative, where it properly belongs. Finally, in its scheme of combining life insurance with the contract of workingmen to purchase homes, it introduced the most valuable device brought forward in recent years in connection with the effort to improve the housing conditions of the working classes.<sup>1</sup>

*Loans to the agricultural classes.*—The problem of so-called agricultural credit is world wide. With the increasing use of credit in business transactions the difficulty with which it is obtained in the rural sections has been felt as a peculiar hardship. Throughout Europe efforts have been made to develop credit

<sup>1</sup> This system, it may be remarked, has been introduced into the United States by Dr. Gould in the City and Suburban Home Company of New York City.

institutions peculiarly suited to the farming class. As we have seen in our historical sketch, the first action taken in this direction by the general savings bank was in 1884. The system then created and afterwards extended by the law of 1894 is similar in many respects to that just described in advancing money for workmen's houses, and therefore can be briefly described. The same leading principle of loaning only through intermediary societies is here followed. The farmers are encouraged to form mutual or co-operative credit societies, and loans are made to them by the bank. The details of the system under which the loans are made, and the guarantees against loss, are too complicated to permit of our entering upon their consideration here. The general system is that of our building and loan associations in advancing money to members.

For a number of years this part of the operations of the bank developed but slowly. Within recent years, however, the progress has been much more rapid. This has been due to the passage of the law of 1894, specially favoring co-operative credit societies. The interest originally charged by the bank on its loans was 4 per cent. In 1895 the rate was reduced to 3.75 per cent. for loans over 10,000 francs in amount and 3.50 for loans under that amount. The development of the system is shown in the amount loaned by the general savings bank to these societies. It increased, as we have seen, from 2,104,000 francs in 1893 to 4,470,000 francs in 1898. In this last year the number of co-operative credit associations recognized by the bank was 204, an increase of 39 over the preceding year. The indications, indeed, point to a decided growth in the system in the immediate future.

*Old-age and invalidity insurance.*—Turning now to the study of that part of the operations of the bank which relate to the provision of insurance against old age and invalidity, we in fact undertake the examination of what is almost an independent institution. This branch was created fifteen years before the general savings bank came into existence, and even after the two services were put under one management, their operations

and accounts were kept as distinct as if they were under separate administrations.

The essential character of the system of workingmen's insurance here provided has changed but little in the nearly fifty years of its history. The object of the bank is to offer an institution in which individual workingmen can provide for a pension in their old age, or when invalidated for labor, through small payments made during the active period of their lives, or in which large employers of labor, such as railroad or mining companies, so desiring, can insure all of their employees at the same time. In principle and practice the bank is purely voluntary in operation as regards its use either by employers or employees, and is self-supporting.

The distinction between individual insurance or that taken out by the workingmen themselves, and collective, or that secured by the employers, is an important one. The plan of individual insurance is, in general, such as would be offered by a private insurance company. The chief difference lies in the provision that depositors are not required to contract for a certain fixed pension, which would thus necessitate the regular payment of certain premiums. Each depositor is left entirely free as to the amount of his payments. A separate account is opened with each, and he then makes deposits as he is able. Each deposit gives a right to a pension, the value of which is determined according to the age of the depositor. The sum of these pensions constitutes the amount of the annuity to which he will ultimately be entitled. Each depositor thus knows at all times, by consulting the tables of the bank and his account book, the amount of the pension to which his payments entitle him.

The minimum age at which pensions begin to run is fixed at 50 years, but can be deferred until the depositor is 65 years of age, in which case, of course, the amount of the pension is proportionately increased. In case of invalidity resulting in inability to work, before the depositor reaches the age of 50 years, a pension is paid, the value of which is determined according to the amount of the payments that have been made and the age

of the depositor. In order to limit the work of this service strictly to the working classes, the maximum pension that can be acquired is limited to 1200 francs.

In both individual and collective insurance a choice is offered between two kinds of insurance; that obtained when the depositor desires his payments to be considered as alienated (*capital aliéné*), and that when he desires it to be considered as reserved (*capital réservé*). In the first case, provision is made simply for the constitution of an annuity after the depositor has reached the required age. In the second, the additional provision is made that on the death of the depositor all deposits that he may have made will be repaid without interest to his heirs, the principle of life insurance thus being combined with that of old-age pensions. It is needless to say that the same amount of deposits will give a right to a much larger pension in the former than in the latter case. The following table, published by the bank, will show the value of the old-age pension earned by depositors making a regular monthly payment of one dollar, according to the system of insurance selected, the age at which the first payment is made, and the age when the owner elects to enter upon its enjoyment:

Age at first payment	Alienated capital				Reserved capital			
	50 years	55 years	60 years	65 years	50 years	55 years	60 years	65 years
6	\$105.32	\$160.06	\$255.84	\$440.61	\$64.65	\$97.02	\$153.31	\$261.48
10	86.81	132.89	213.51	369.04	51.94	78.36	124.25	212.35
12	78.56	120.78	194.63	337.13	46.37	70.18	111.49	190.80
15	67.27	104.20	168.83	293.50	38.87	59.18	94.37	161.84
20	51.07	80.43	131.80	230.89	28.44	43.87	70.52	121.51
25	37.74	60.86	101.31	179.34	20.20	31.74	51.64	89.59
30	26.82	44.83	76.33	137.13	13.72	22.26	36.85	64.58
35	17.88	31.71	55.90	102.57	8.72	14.91	25.40	45.24
40	10.60	21.01	39.25	74.41	4.90	9.31	16.69	30.50
45	4.71	12.38	25.79	51.67	2.07	5.14	10.19	19.52
50		5.46	15.01	33.45		2.11	5.48	11.55
55			6.51	19.07			2.18	5.99
60				8.07				2.29
64				1.40				0.37

The history of the operations of this system shows a steady but slow extension of its work during the first five years of its

existence. Within the last four or five years, however, during which the subject of workingmen's insurance has attracted increased attention, the progress has been much more rapid. The annual reports, probably on account of the difficulty of determining at a given time the number of persons embraced under the contracts for collective insurance, do not show the number of existing accounts, but only the number of new accounts opened during the year. This latter information, however, shows the great rapidity of the movement during the past few years. During the past decade, 1889-1898, the number of new accounts opened during each year were 917, 1750, 3642, 3874, 3525, 4438, 5790, 10,549, 17,159, and 43,873.

This very rapid progress during the past two or three years has been almost entirely due to the increased extent to which the large employers of labor and the various local governments are making use of the bank for the insurance of their employees. Thus, while in 1893 but 4 communes and provinces insured their employees in this way, their number rose in 1894 to 12, in 1895 to 30, in 1896 to 69, and in 1897 and 1898 to 144. The number of industrial and transportation companies doing the same increased during this period from 24 to 35. In point of fact, the work done by this insurance institution is of little importance as far as individual insurance is concerned, but is constantly increasing in the much more important branch of collective insurance.

The number of persons drawing pensions is naturally increasing from year to year. In 1895 their number was 2608; in 1896, 2810; in 1897, 3056, and in 1898, 3332. The annual payments required on the 3332 pensions in force December 31, 1898 amounted to 1,239,585.84 francs, the average value of the pension thus being slightly over 372 francs.

*Life insurance.*—But a very brief statement is required concerning this, the fourth service of the general savings bank. The provision of life insurance apart from that furnished in connection with loans for building workingmen's houses, was not authorized until June 21, 1894, and did not go into operation until 1896. The system has thus but barely commenced operations.

The law of 1894 directs the organization of an independent service under the General Savings Bank, for the provision of life insurance. The scheme devised offers to those desiring to contract insurance, a choice between three kinds of policies: that of, first, straight life, the payments of premiums, however, ceasing to be required after the insured reaches the age of 55, 60, or 65 years, as may be desired; second, mixed or endowment, where the policy is paid either upon death or upon the expiration of the endowment period, which may be 10, 15, 20, or 25 years; and third, the same policy except that it becomes payable upon the person insured reaching the age of 55, 60, or 65 years, as may be agreed upon, instead of at the end of a certain term of years.

Applicants must be at least 21, and not over 55 years of age, and pass the usual medical examination. Premiums are paid annually. Under no circumstances can a policy be forfeited. In case of nonpayment of premiums the policy is converted into one fully paid up, for the benefit of its holder. The tables of premium rates are constructed upon the basis of the English Life Table No. 3, 3 per cent. and 3 per cent. additional to meet operating expenses. The following table shows the value of the policy acquired through the annual payment of ten dollars under each form of contract according to these premium tables:

	Age at first payment					
	21	25	30	35	40	45
<b>Straight life:</b>						
Policy fully paid up at age 55 years	498.17	437.17	362.55	289.29	217.35	146.30
Policy fully paid up at age 60 years	525.56	467.21	396.33	327.38	260.51	195.67
Policy fully paid up at age 65 years	545.77	489.38	421.26	355.49	292.36	232.10
<b>Endowment:</b>						
Policy matures in 10 years -	108.89	108.47	107.82	106.96	105.74	104.00
Policy matures in 15 years -	169.80	168.57	166.69	164.14	160.56	155.47
Policy matures in 20 years -	233.42	230.73	226.50	220.75	212.18	201.97
Policy matures in 25 years -	297.97	292.74	284.65	273.74	259.06	
Policy matures at age 55 years -	402.60	346.87	280.44	217.50	158.18	102.46
Policy matures at age 60 years	455.46	399.74	333.10	269.67	209.66	153.18
Policy matures at age 65 years -	499.66	444.39	378.20	315.05	255.24	199.00

Operations under this system began July 24, 1896. During the balance of the year but eleven policies for a total capital of 50,931.50 francs were taken out. On December 31, 1898, there were in force 403 policies for a total of 1,580,452.30 francs. Of these, 296 were for straight life, and 107 for endowment policies. These figures would seem to indicate that the system of life insurance here offered is progressing but slowly. It is as yet, however, too early to foresee the ultimate importance that it may attain.

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## PRICES AND INDEX NUMBERS.

THERE is today considerable confusion as to the significance or value of tables of prices and index numbers. The averages figuring in these tables have been a fruitful source of controversy. The arithmetic mean is most commonly employed, but W. S. Jevons advocated and employed the geometric method,<sup>1</sup> and F. Y. Edgeworth has suggested the median<sup>2</sup> as preferable to any other means for representing the average, at least, in a certain type of cases. The majority of statisticians favor the use of index numbers for determining the movement of prices, but M. G. Mulhall<sup>3</sup> regards the results given by index numbers as utterly fallacious, and N. G. Pierson,<sup>4</sup> by applying a criterion that appears to show glaring inconsistencies, has found justification for discrediting all attempts at discovering movements of prices.

Under the circumstances it will perhaps not be out of place to re-examine the premises to these conflicting views. With this in view this paper presents the following theses :

1. The arithmetic is the only rigorous method for computing averages.
2. Present systems of index numbers are defective, but the remedy is simple.
3. Periodic movement of prices can be accurately presented in the case of single commodities ; in the case of a greater number of commodities the movement can be shown only when the quantities in the various periods are proportional.

### I. METHODS OF TAKING AVERAGES.

In preparing tables of prices and index numbers it has been necessary to reduce lists of figures representing prices for various months or years, or for various commodities, to average values.

<sup>1</sup> *Investigations in Currency and Finance*, pp. 23, 24, 120 et seq.

<sup>2</sup> *Reports of the British Association for the Advancement of Science*.

<sup>3</sup> *History of Prices* (London, 1885), p. 7.

<sup>4</sup> *Economic Journal*, March 1896, p. 131.



Primarily it is a matter of importance that averages have been accurately computed. It would seem that for so simple a matter as taking an average there would be little excuse for uncertainty or confusion. To be sure, where considerations of weighting the figures enter, the question becomes somewhat complex. But aside from any such complexity, there has been by no means unanimity or certainty of opinion as to the proper method of taking an average. Jevons persisted in using what is known as the geometric method, and the influence of his name has been sufficient to perpetuate a considerable measure of doubt as to the merits of the various claims. To make matters worse, Jevons introduced into the controversy a new potential candidate for the honor of representing the average, namely, the harmonic mean. We have thus to consider three kinds of mean in relation to average—arithmetic, geometric, and harmonic. An arithmetic series, as is well known, is one that has a constant difference between the successive members, as 5, 8, 11, 14, etc., with the constant difference 3. A geometric series has a constant ratio between successive members, as 2, 4, 8, 16, etc., with the constant ratio 2. The harmonic series is not so simply stated as either of the above. For this discussion, the relation of this series to the arithmetic will afford the most intelligible and suggestive definition. If we express an arithmetic series in the form of fractions ( $\frac{2}{1}$ ,  $\frac{3}{1}$ ,  $\frac{4}{1}$ ,  $\frac{5}{1}$ , etc.) and invert the various fractions, we have a harmonic series, as  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ , etc. In any of these series, any member is a mean between its left-hand and its right-hand neighbors. For instance, in the harmonic series above,  $\frac{1}{3}$  is the mean between  $\frac{1}{2}$  and  $\frac{1}{4}$ . It needs only to be added here that between the same two quantities the arithmetic mean is numerically greater than the geometric, and the geometric is greater than the harmonic. For instance, between 4 and 25 the arithmetic mean is  $14\frac{1}{2}$ ; the geometric, 10; the harmonic,  $6\frac{2}{3}$ . The three series are:

4,	$14\frac{1}{2}$ ,	25	(arithmetic)
4,	10,	25	(geometric)
4,	$6\frac{2}{3}$ ,	25	(harmonic)

The conception of average is so wrought into the consciousness from early life that it scarcely needs elucidation. Perhaps it should be said rather that it would need no elucidation, so far as this discussion goes, had not Jevons succeeded in enveloping it in a perplexing maze of uncertainty. One or two examples of averages, whose mere statement will compel assent, will suffice for our purpose. If two boys are aged, respectively, 6 and 10 years, their average age is 8 years, the arithmetic mean.  $6+10=16$ , and  $16\div2=8$ . That is, the conception of an average is such that if the number of units in it be substituted in each term of the series to be averaged, the aggregate number of units is not changed. If a quantity fails in this test it must be discarded—it is not an average.<sup>1</sup> If two clocks are, respectively, 20 and 30 minutes fast, they average 25 minutes fast, the arithmetic mean. The last example may be put thus: If two clocks vary from the true time, respectively, by 20 and 30 minutes, their average variation is 25 minutes, the arithmetic mean. Why should we not say of two prices, say of wheat, if the price of one bushel is \$1.50, and the price of another bushel<sup>2</sup> is \$2.00,

<sup>1</sup> To the objection that this conception of an average is arbitrary, the reply is (1) that it conforms to ordinary usage, and (2) that no other conception is available to determine the price movement. This latter consideration, which has special importance in this discussion, is developed in the text. The movement of price can be determined by a comparison of ratios—the ratios of total prices, or values, as compared with the ratios of total quantities. The alternative and convenient method is by the use of averages, and it goes without saying that the two methods should tally in their results.

<sup>2</sup> It may not be amiss to caution against taking the simple average between the unit prices, in case of unequal quantities of a commodity. If 2 bushels of wheat sell at \$1.00 per bushel and 3 bushels sell at \$1.50 per bushel, the average price is not \$1.25, but \$1.30 per bushel, as follows:

2 bushels at \$1.00 per bushel bring \$2.00

3 bushels at \$1.50 per bushel bring \$4.50

Total, 5 bushels at a total of \$6.50 is \$1.30 per bushel.

The same result, of course, may be obtained by distributing the units of commodity with their prices, and taking the arithmetic average, as follows:

1 bushel at the rate of \$1.00

1 bushel at the rate of 1.00

1 bushel at the rate of 1.50

1 bushel at the rate of 1.50

1 bushel at the rate of 1.50

Total, 5 bushels, at a total of \$6.50, or \$1.30 per bushel.

In Jevons's work, unequal quantities are scarcely considered. Whatever the relative quantities sold, the price of the unit is taken, and the computation based on

the average price for the two bushels is \$1.75, the arithmetic mean? Or, if \$1.00 be taken as the standard price for wheat, and we wish to get the average variation for two bushels sold, respectively, at \$1.50 and \$2.00, why will not the transparency of the following process vouch for the correctness of the result:

Bushel 1 varies from the standard price \$0.50; bushel 2 varies from the standard price \$1.00; hence the average variation is \$0.75, or, adding \$0.75 to the standard price, \$1.00, the average price for the two bushels is \$1.75 per bushel? If we express the relation of the varying prices by ratios or percentages of the standard price, the result is identical:

If bushel 1 sells for 200 per cent. of the standard price, and bushel 2 sells for 150 per cent. of the standard price, the average percentage for the two bushels is 175; or, if \$1.00 be the standard, the average price for the two bushels is \$1.75 per bushel.

In presenting the logic of his method for determining the average variation (see below), Mr. Jevons clouds the discussion by introducing two commodities.<sup>1</sup> So far as the particular point at issue is concerned it matters not whether we consider the variations applying to two periods and a single commodity, or those pertaining to two commodities and a single period. There are points of distinction affecting these two cases that will be taken up later; but at present, for the sake of simplicity, we will regard the two cases as one. Mr. Jevons's account of his selection of the geometric mean is as follows:

Thus the price of cocoa has nearly doubled since 1845-1850. It has increased by 100 per cent., so that its variation is now expressed by the number 200. Cloves, on the contrary, have fallen 50 per cent., and are now at that. The question of unequal quantities is one that will be considered in connection with the principle of "weighting," and it need not encumber the present discussion.

<sup>1</sup> The propriety or significance of averaging the prices, or the variations of prices, of commodities so diverse as yards of cotton and pounds of tobacco will be discussed in another place. Mr. Jevons takes the affirmative as to variations, but the question of the proper method of ascertaining an average in no wise depends on any concrete significance of the figures or numbers involved. Whether these latter represent real prices or fictitious or hypothetical prices, or erroneous variations, we are not now concerned to discuss.

50. The arithmetic mean of these ratios would be  $\frac{1}{2}(200+50)$  or 125. The average rise of cocoa and cloves would then appear to be 25 per cent. But this is totally erroneous. The geometric mean of the ratios expressed by the numbers 200 and 50 is 100. On the average of cocoa and cloves there has been no alteration of price whatever. In other words, the price of one is doubled, of the other halved—one is multiplied by two, one divided by two—on the average, then, the prices of these articles remain as they were, instead of rising 25 per cent.<sup>1</sup>

Now two methods of obtaining an average that yield diverse results cannot both be right. If one is right, the other must be wrong. Moreover the discrepancy between the results would have to be quite insignificant to justify the adoption of the inaccurate method on the ground of its greater simplicity. But Mr. Jevons accentuates the divergency of results and thus emphasizes the importance of accuracy in method. The plausibility of the reasoning quoted above arises from setting the two ratios 2 and  $\frac{1}{2}$  face to face, to offset each other. But the ratio 2 in the case cited corresponds to an advance of 100 points, while  $\frac{1}{2}$  corresponds to a decline of but 50 points. And if we contrast 100 with 50 it is certainly equally plausible that the former more than offsets the latter, so that the average should show a variation from the original prices.

It is not difficult to expose the speciousness of Mr. Jevons's reasoning. Division and multiplication are reverse processes, and it sounds plausible to say that multiplying by 2 and dividing by 2 are mutually neutralizing operations, but it depends entirely on the quantities operated on. If 100 be multiplied by 2, and then the product 200 be divided by 2, the original quantity 100 is regained; but if we perform the two operations on the same quantity, as does Mr. Jevons, the result is not so simple. He multiplies 100 by 2 and divides 100 by 2, and then by dwelling on the identity of multiplier and divisor, and ignoring the remaining elements of the problem, he reaches a chimerical conclusion. This sort of reasoning will not stand a practical test for one moment. If a man should make two investments of \$100 each, and realize 200 per cent. on one investment and 50

<sup>1</sup> *Investigations in Currency and Finance*, p. 23.

per cent. on the other, Mr. Jevons's style of reasoning would figure out no reward for the investor's pains. Modern book-keeping shows no such sterility in real transactions. The investor makes \$100 on one transaction and loses \$50 on the other, showing a net gain of \$50.

Mr. Jevons adhered to the geometric mean in spite of adverse criticism, although he conceded some strength to the opposition, witness the following passage :

The reasons for adopting the geometric mean were explained in my pamphlet, and I still think those reasons sufficient. I must mention, however, that the method has been called in question by Dr. E. Laspeyres. . . . Dr. Laspeyres urges, if I read him aright, that as the value of gold meant its *purchasing power*, we ought to take the simple arithmetic average of the quantities of gold necessary for purchasing uniform quantities of given commodities.<sup>1</sup> There is certainly some ground for the argument. But it may be urged with equal reason that we should suppose a certain uniform quantity of gold to be expended in equal portions in the purchase of certain commodities, and that we ought to take the average quantity. This might be ascertained by taking the *harmonic mean*. Thus there are no less than three different kinds of averages which might be drawn.<sup>2</sup>

Mr. Jevons does not venture an explanation of how a harmonic mean is obtained under the stated conditions, but contents himself with mathematical illustrations of the three kinds of *mean*, and by means of an example educes the result that "the mean rise of price might be thus variously stated :

	Per cent.						
Arithmetic mean	-	-	-	-	-	-	50
Geometric mean	-	-	-	-	-	-	41
Harmonic mean	-	-	-	-	-	-	33

It is probable that each of these is right for its own purposes when these are more clearly understood in theory." Then follow three remarkable reasons for adhering to his method :

Because (1) it lies between the other two; (2) it presents facilities for the calculation and correction of results by the continual use of logarithms, without which the inquiry could hardly be undertaken; (3) it seems likely to give in the most accurate manner such general change in prices as is due

<sup>1</sup> *Hildebrand's Jahrbücher*, vol. iii. p. 97.

<sup>2</sup> *Ibid.*, p. 120.

to a change on the part of gold. For any change in gold will affect all prices in an equal ratio, etc.

The first two of these reasons are remarkable from Jevons's own original standpoint of the importance of accuracy. The third reason is remarkable in its contention, since a change on the part of gold is manifested in the same way as a change on the part of commodities, namely, in the prices; and the simple question of the average of prices, or the average of variations in prices, is not affected by the causes of those variations. If so, we might need a different method of computation for every cause of variation.

That the arithmetic mean gives the correct average will be obvious if the relation of price is stated in expanded form in terms of purchase. For instance, if one dollar purchase one bushel of wheat at one date, and one dollar at another date purchase two bushels, the two dollars purchase in the aggregate three bushels, which yield an average purchase of one and one half bushels for one dollar, or the arithmetic mean between one bushel and two bushels. Let us now describe what takes place if we reverse the terms of the problem. If one bushel purchase one dollar today, and one bushel purchase two dollars tomorrow, two bushels purchase in the aggregate three dollars, or one bushel on the average has a purchasing power of one and one half dollars, the arithmetic mean. This latter statement reflects with simple fidelity the mathematical relation involved in price changes, and establishes beyond cavil the correctness of the arithmetic method. The same result follows if we consider variations of price from a given standard instead of the prices themselves. For instance, if one dollar per bushel be taken as the standard price for wheat, and we wish to ascertain the average variation between two dollars per bushel and one half dollar per bushel, for which Mr. Jevons's method gives as the result no variation, the correct result is evident from the following process:

At two dollars, the excess for one bushel is	-	\$1.00
At one half dollar, the deficit for one bushel is	-	50
The aggregate excess for the two bushels is	- -	50

which gives an average excess of .25 to the bushel, showing the average price of the wheat to be \$1.25, or .25 in excess of the standard taken.

Mr. Jevons intimates that a certain method of looking at the problem will yield a process that results in a "harmonic mean." As "harmonic mean" is indissolubly associated with "arithmetic mean," by definition, it follows that the harmonic mean can be made to emerge wherever the arithmetic mean figures in a result; but in this case the former certainly does not emerge as the correct register of an average. To illustrate:

- (1) Given, \$1 purchases 1 bu.
- (2) Given, \$1 purchases 2 bu.
- (3) Result, \$1 purchases  $1\frac{1}{2}$  bu. (Average).

1,  $1\frac{1}{2}$ , 2 are in arithmetical progression, and if we compute the purchasing power of 1 bushel of wheat in terms of money at the three different rates, we get a harmonic progression, as follows:

At \$1 per bu., 1 bu. purchases \$1  
 At \$1 per 2 bu., 1 bu. purchases \$ $\frac{1}{2}$   
 At \$1 per  $1\frac{1}{2}$  bu., 1 bu. purchases \$ $\frac{2}{3}$

1,  $\frac{2}{3}$ ,  $\frac{1}{2}$  are in harmonic progression,  $\frac{2}{3}$  being the harmonic mean between 1 and  $\frac{1}{2}$ . This harmonic mean does not express an average. It is evident that the average price of one bushel of wheat at the three rates of

1 bu. purchasing \$1  
 1 bu. purchasing \$ $\frac{1}{2}$   
 1 bu. purchasing \$ $\frac{2}{3}$

is ascertainable by summing up the second column and dividing by 3, which is an *arithmetical* process. The harmonic mean,  $\frac{2}{3}$ , in the above case is obtained by first forming an arithmetical series, the middle term of which denotes an average, and then, owing to the inevitable reciprocity of the problem, the conditions furnish the harmonic series that is inseparably bound up with the former. The arithmetic series is 1,  $1\frac{1}{2}$ , 2, or  $\frac{1}{1}$ ,  $\frac{3}{2}$ ,  $\frac{2}{1}$ . Inverting each of these fractions we have 1,  $\frac{2}{3}$ ,  $\frac{1}{2}$ , a harmonic series by definition. The harmonic series is bound up with the arithmetic series by the reciprocal relation of commodity and

price; or, to speak more accurately, by the reciprocal relation of the units that express quantitatively the commodity on the one hand and the standard of value on the other.

A writer in the *Quarterly Journal of Economics* for October 1886, seems to think that the character of an average, when pressed into the service of political economy, is so thoroughly fictitious that it is quite optional to employ one mean or another as fancy or circumstances may dictate.<sup>1</sup> If this were true, the labor of compiling tables involving averages would be indeed a useless and fruitless task. Fortunately, it is not true. This writer bungles distinctions. It is true that the average price does not register a concrete reality, but as a mathematical relation existing among *real* prices, it is as real and definite as the prices themselves. This means that fictitious averages are simply pseudo-averages, and result from erroneous computation.

It will be interesting to note into what a tangled web this notion of a fictitious average leads. As a notion, it is the creation of Jevons presented in his *Principles of Science*, chap. xvi. Its style of service may be briefly illustrated. Consider two commodities, one of which has remained stationary, or at 100 per cent., and the other has doubled in price, or advanced to 200 per cent. The arithmetic average is 150 per cent., or 50 per cent. advance. Now this number 150 marks a deviation of 50 from both 100 and 200; it therefore embodies an error of 50, when made to represent the one or the other. This saddles a greater proportional error on the smaller number, but as the choice of a fictitious average is under no sort of constraint, one has a right to favor the larger quantity. However, if the quantities are regarded equally important, the choice of the average would naturally fall on the harmonic mean. In the example cited,

<sup>1</sup> "Its fictitious character renders it possible to make choice among different values, and thus among different methods of finding it. This is generally overlooked by those who invariably use the arithmetic mean as if it were the only one which could be applicable. The only justification for any fictitious mean is to be found in its convenience as a representative of the true quantities. It is upon this criterion that Mr. Jevons based his choice."—F. COGGESHALL, "The Arithmetic, Geometric, and Harmonic Means."



$133\frac{1}{3}$  is the harmonic mean between 100 and 200, giving an error of  $33\frac{1}{3}$  and  $66\frac{2}{3}$ , respectively, for the two quantities averaged, evidently an equitable apportionment, as  $33\frac{1}{3}$  and  $66\frac{2}{3}$  are, respectively, one third of 100 and 200.

The fanciful character of this conception of an error that requires distribution will appear, if we introduce some prices between these two extremes, 100 and 200, such as will not disturb the average. Suppose a third commodity has advanced to  $133\frac{1}{3}$  per cent., which will not disturb the average. Such a commodity would get no share of the error, and yet, according to the reasoning, this commodity is much better able to stand it than the one represented by 100 per cent. It is clear that if a number of commodities are to share an error in proportion to ability to stand it, the average cannot exceed the price represented by the minimum percentage in the scale of variation. For instance, if several commodities suffer variations from standard price, represented by 50, 51, 75, 125, 200 per cent. and the average must be taken so as to distribute the error according to the magnitude of these numbers, this average must be taken less than  $50\frac{1}{2}$ . Now, if we introduce commodities whose scale of variation will fall between 50 and  $50\frac{1}{2}$ , it is plain that our logic will push the average down to 50. Of course any figure lower than 50 will answer the same purpose.

The absurdity of the geometric method will be manifest if we consider cases of extreme variation. To begin with Mr. Jevons's illustration, a rise expressed by the ratio 2 is offset by a decline expressed by  $\frac{1}{2}$ . In the same way a rise expressed by 4 is offset by a decline expressed by  $\frac{1}{4}$ ; or, which is the same thing, if two commodities each double in price, their variation is offset by that of a single commodity declining to  $\frac{1}{4}$  its standard price. By the same logic 100 commodities doubling in price would be offset by one commodity declining to  $\frac{1}{2^{100}}$  its standard price. That is to say, one commodity by declining in price can offset any rise in all other commodities combined, and the result will be an average of no variation.

We can bring out the absurdity in a still bolder form. Let us take the case of a commodity that may have a compass of price, including zero, such as water. By the geometric method what is the average price of water between its extreme rates, taking the maximum rate, 2, and the minimum rate 0? The true average is the arithmetic mean, 1. The geometric mean is  $\sqrt{2 \times 0} = 0$ . That is, the average price of water by the geometric method would be its minimum price. The harmonic mean in this instance is the same as the geometric mean, and hence is equally absurd as representing an average. Indeed, the introduction of the harmonic mean can serve no other purpose than to cloud the transparency of a simple problem, and thereby furnish the pretext for a compromise between two so-called equally plausible results.

Professor F. G. Edgeworth has entered the lists with a novel suggestion for an average. Representing the variations in the prices of the various commodities by percentages, he writes these percentages down in the order of their magnitude, and selects the central member of the series as the average. For instance, if there are five commodities, and the percentages representing their variation are 75, 90, 95, 115, 125, the average variation is 95. Professor Edgeworth styles this mean the *median*. Its claims are earnestly urged in the Reports of the British Association for the Advancement of Science, 1888, 1889, in the *Journal of the Royal Statistical Society*, June 1888, and elsewhere.

The method of the median has the conspicuous merit of extreme simplicity, *conspicuous* because its *sole* merit. It is recommended by Professor Edgeworth to serve for a special sort of cases which he calls typical. "For the purpose of a mere average or type, we are to take account of all manner of goods, and we are not concerned with the quantity of each commodity. We have for this purpose only to ascertain the ratios or percentages . . . and then to take a simple or unweighted mean of these ratios."<sup>1</sup>

<sup>1</sup> "Appreciation of Gold," *Quarterly Journal of Economics*, January 1889, p. 161.

This is the type of cases in which the method of the median is especially appropriate, according to Edgeworth. On the contrary, this is the type of cases that affords no pretext for deviating from the true or arithmetic method. Where data are deficient, it is possible that certain devices may furnish an approximate average, but in Edgeworth's typical cases, the data are all at hand, quantities are not considered—that is to say, the quantities are taken uniform for all commodities. In these cases the arithmetic method is eminently practicable as well as theoretically appropriate.

Professor Edgeworth is willing to indulge any prejudice in favor of weighting the percentages. "However, it may be admitted," he says, "that though there is no peculiar propriety in using a *weighted* mean for the present purpose, at the same time there is not much harm in doing so."<sup>1</sup> In another paper he makes the concession stronger. "There is a variety [of median] constituted by assigning special importance to those returns which we have reason to suppose are specially good representatives of the changes affecting the value of money."<sup>2</sup> Then follow proposals for weighting, according to one or two simple devices, which strike one as jocular rather than serious.

As Professor Edgeworth's median logically contemplates at best but an approximate result, it need detain us no longer.

## II. THE DEFECT IN INDEX NUMBERS AND THE REMEDY.

The initial and simplest problem connected with prices or index numbers is to ascertain the comparative prices of a single commodity for successive periods. For convenience a period of comparative stability of the market is taken as the base period, and the prices of the various periods under consideration are compared with the average price for this period. If index numbers are used, the price of the base period is represented by 100, and all prices are reduced to the scale of this base. For instance, consider some specific commodity, as oats. If oats are rated at

<sup>1</sup> *Ibid.*, p. 162.

<sup>2</sup> *Report of the British Association for the Advancement of Science*, 1888, p. 207.

40c. per bushel during the standard period and rise to 50c. at a subsequent period, the index numbers for the two periods are 100 and 125. The important point here pertains to the method of ascertaining this price of 40c. or 50c. Of course, the figures denote the average price, but precisely how is this average computed? It is customary to take prices at stated times during the period, once a quarter, or once a month, and compute the simple average of the schedule thus obtained. This will usually answer for practical purposes, especially if the variation during the period is slight; but a higher degree of accuracy will be obtained by allowing for the differences of quantity sold at the different rates. If twice the quantity is sold at one rate as compared with another, the former rate should be taken twice in determining the average. To make the matter perfectly clear, take the following schedule for oats for a year by the month: January, 40c.; February, 50c.; March, 55c.; April, 45c.; May, 40c.; June, 40c.; July, 50c.; August, 55c.; September, 45c.; October, 35c.; November, 40c.; December, 45c. The simple average computed by adding the various figures and dividing by 12 is 45c., which ordinarily would be taken as the average. For the sake of simplicity of results we will suppose that equal quantities are sold by the month with the exception of October, which schedules the lowest price. It would not be a singular phenomenon if the low price should attract an unusual sale. If the quantity sold in October should be thirteen times as great as that for any other month, the price 35c. for that month should figure thirteen times in the sum, and the divisor should be 24 instead of 12, giving the result 40c., or 5c. less than the former result. This gives an importance to the price 35c. thirteen times as great as that for any other month due to the proportionally larger quantity for October. It is not usual to speak of "weighting" when considering a single commodity; but the propriety of so doing is perfect, as is evident from the above example, and the significance is clear. Strictly construing an average, it is the result of dividing the total proceeds of a commodity during the period, say a year, by the number of units

of the commodity involved in the transactions. If three million bushels and 1.2 million dollars be these totals, the latter divided by three million gives 40c. as the average price per bushel. The same result would follow, if the prices scheduled by the month were weighted proportionally to quantities sold, and the weighted figures entered into the calculation.

When we come to a plurality of commodities, the case is not quite so simple. Indeed the subject of averages and index numbers as applied to a variety of commodities has been a theme of endless controversy. Jevons justified the propriety of averaging *variations* in distinction from the prices themselves as follows:

There is no such thing as an average of prices at any one time. If a ton of bar-iron costs £6, and a quarter of corn £3, there is no such relation or similarity between a ton of iron and a quarter of corn as can warrant us in drawing an average between £6 and £3; and similarly of other commodities. If at a subsequent time a ton of iron costs £9, and a quarter of corn £3 12s., there is again no average between these quantities. We may, however, say that iron has risen in price 50 per cent. or by  $\frac{1}{2}$ ; what was previously 100 has become 150; corn has risen 20 per cent. or by  $\frac{1}{5}$ ; what was 100 has become 120. Now the ratios 100: 150 and 100: 120 are things of the same kind, but of different amounts, between which we can take an average.<sup>1</sup>

The above statement is so far erroneous that almost the exact reverse is true. It is a very simple matter to take the average price of any number of things alike or unlike, as is evident from the conception of an average; but in general it will be found impossible to take an average between variations.

But first let us examine some of the methods of averaging that have obtained more or less sanction and prestige. Jevons used, generally speaking, unweighted prices or index numbers. That is, if the index numbers for a variety of commodities for any period were found to be, say, 90, 105, 99, the average index number would be simply the sum divided by 3. Most statisticians at present reject this sort of an average. They insist that the prices, for instance, of salt, mercury, wheat and beef cannot be summed up and divided by 4, with any significant result.

<sup>1</sup> *Investigations in Currency and Finance*, p. 23.

Professor Edgeworth, however, approves this very process as applicable to one of his species of averages:

For the purpose of a mere average or type, we are to take account of all manner of goods, and we are not concerned with the quantity of each commodity. We have for this purpose only to ascertain the ratios or percentages, such as

<u>Present price of anchovies</u>	<u>Present price of alkali</u>	<u>Present price of beef</u>
<u>Original price of anchovies</u>	<u>Original price of alkali</u>	<u>Original price of beef</u>

and then take a simple or unweighted mean of these ratios. . . . This rule will excite the mirth of some. What, they will say, assign the same importance to pepper and nutmeg as cotton and iron! Yes, I reply, for the present purpose, etc.<sup>1</sup>

If we could ignore quantity our problem would be much simplified; but the plain truth is, that if we do ignore quantity, we vitiate our results. The simple average of the prices of pepper, nutmeg, cotton and iron cannot be taken with any significant result, for the reason that such an average would not correspond to the phenomena of actual facts. Such an average price could not be applied to each of the four commodities, to get the total proceeds from the real transactions of any period of time under consideration; and an average price has no meaning unless it satisfies this condition. The simple average as taken by Professor Edgeworth can apply only to a hypothetical case. If we suppose a unit of each of the commodities to be sold at a specific rate, the average rate for these several transactions is the simple average; but such a case affords no instruction for the problem engaging us.

This point is so important in our discussion that it will warrant a simple and careful presentation. We have seen\* that in the case of a single commodity, an average has to do essentially with quantities. If a bushel of wheat sells for \$1.00, and a second bushel for \$1.50, the average for the two bushels (quantity)

<sup>1</sup> "Appreciation of Gold," *Quarterly Journal of Economics*, January 1889, pp. 161-162.

\* See footnote, p. 173.

is \$1.25. Now if two bushels sell at \$1.00 per bushel, and three bushels sell at \$1.50 per bushel, the average price is not \$1.25. This would ignore quantity. If \$1.25 is substituted for the two rates, \$1.00 and \$1.50, the five bushels aggregate \$6.25, whereas in the real transaction we get

$$\begin{array}{rcl} 2 \text{ bushels at } \$1.00 \text{ per bushel,} & = & \$2.00 \\ 3 \text{ " } \$1.50 \text{ " } & = & 4.50 \end{array}$$

or five bushels aggregate \$6.50. The true average price is \$6.50 divided by 5 (quantity), or \$1.30.

Now it would be passing strange if the factor of quantity, so indispensable in the case of a single commodity, could be ignored when a plurality of commodities is concerned. The truth is that it is this very ignoring of quantity (the ignoring altogether, or the inadequate providing for quantity by recourse to arbitrary systems of weighting) that has led to divergent and unsatisfactory results.

The meaning will be clear by taking a simple example. If the average prices of wheat and rye are \$1.00 and .50 for a specific period, it will not do to take the simple average of \$1.00 and .50 (or .75) for the average price of the two commodities. Suppose the transactions in wheat for the period are four million bushels, for rye one million bushels; we have

$$\begin{array}{rcl} 4,000,000 \text{ bushels at } \$1.00 \text{ per bushel,} & = & \$4,000,000 \\ 1,000,000 \text{ " } .50 \text{ " } & = & 500,000 \\ \text{or } 5,000,000 \text{ " at a total of} & & 4,500,000 \\ \text{Now } 5,000,000 \text{ " at } .75 \text{ per bushel} & = & 3,750,000 \end{array}$$

proving the inadequacy of the simple average, .75. The true average is obtained by dividing the total proceeds, 4.5 million dollars by the total number of bushels involved, five million (quantity), which yields .90 as the correct result. Ninety may be substituted for the prices of wheat and rye without affecting the totals, the decisive test of a correct average.

In the above example of wheat and rye, but one species of unit is involved, the bushel. Let us now consider the case involving different units of quantity. Let us see whether there is any significance to an average price between bar iron and corn.

Jevons says there is not. "If a ton of bar iron costs £6, and a quarter of corn £3, there is no such relation or similarity between a ton of iron and a quarter of corn as can warrant us in drawing an average between £6 and £3." Immediately, however, as quoted a few pages back, he goes on to show that we can draw an average between their *variations*, because variations may be represented as percentages or ratios, and ratios "are things of the same kind . . . between which we can take an average."

Is not price a homogeneous relation the same as ratio, and susceptible to the same sort of comparison and manipulation? Has ratio a superior sort of homogeneity? It is difficult to see wherein. The fact is that homogeneity is not a sufficient criterion here. We are considering relations, and Jevons draws an average between relations, neglecting meantime the objects related, and then he applies the result to the objects. It has been shown that such a proceeding is invalid in case of prices, and price has a *primary* relation to the object. Quantity must be taken account of. Now the ratios referred to here are *primary* relations among the prices, and hence stand in a *secondary* relation to the objects themselves; so that the application of averages of ratios to the objects must be a more precarious matter than in the case of the immediate relation of price. It will appear later that ratios, homogeneous as they are, have to be handled with discriminating recognition of quantity to reach an intelligent interpretation of results.

With the *prices* themselves for a single period the case is different. If the price of iron is £6 per ton, and that of corn £3 per quarter, we may get the average price, but first we must take into account the quantity of each commodity. Say the volume of business in iron for a specific period is 100,000 tons; for corn 200,000 quarters. If the average prices for the two commodities are £6 and £3, we have

100,000 tons of iron at £6, = £600,000  
200,000 quarters corn at 3, = 600,000

Total, 300,000 units of the two commodities aggregate £1,200,000, or £4 per unit as the average for the two commodities.



That this is the true average may be proved by substituting it in the computation as follows :

100,000 tons at £4	= £400,000
200,000 quarters at £4	= 800,000
Total,	£1,200,000

as above.

If it be objected that it is absurd to speak of £4 as applied to a ton of iron, since it may be that iron never sold as low as that figure, the reply is that £4 does not purport to be the price of iron; it is an average price taken between two commodities. One might with equal propriety object to averaging the prices of two grades of corn on the ground that the better grade never sold as low as the average. The confusion arises from not keeping in mind the significance of the concept, average, which is nothing more or less than a vicarious quantity, which, when substituted for the quantities that it replaces, does not change the totality of units comprehended in these various replaced quantities. In the above case, the average £4, substituted for £6 and £3, does not increase or diminish the totality (£1,200,000) of units contained in the quantities, £6 and £3, taken the proper number of times, namely, 100,000 and 200,000 respectively.

We must now establish the *nexus* between price schedules and index numbers. The convenience and attractiveness of the latter are such that the incentive to use them in price statistics is great. On the face of it, there is nothing simpler and more logical than the substitution of a convenient scale of ratios for a schedule of prices. For instance, 100, 80, 125, 200 may be substituted for 20, 16, 25, 40, and the former schedule operated on by all the processes of division, multiplication, etc., involved in the taking of averages, and the results applied to the latter schedule, with complete confidence in the trustworthiness of the conclusions. All that is necessary in the above case is to divide every result obtained from the former schedule by 5. This is evidently valid, since 100, as representing a price, may stand for

the same *value* as 20. If 20 denote that number of *cent* units, changing 20 to 100 simply reduces the unit, *cent*, to *one fifth of a cent*. In the one case, we have 20 *cents*; in the other case, we have 100 *one fifth cents*. The numbers, 100, 80, 125, 200 must yield as trustworthy results as the proportional numbers, 20, 16, 25, 40. In fact, as shown above, they must yield identical results.

And yet the use of index numbers has been condemned on the ground that they give inaccurate results. M. G. Mulhall<sup>1</sup> pronounces a sufficiently sweeping condemnation which is equally appropriate as against the genuine schedule of prices. He takes it for granted that index numbers mean unweighted numbers. If the proper weights be applied, his objections lose their force. A more serious objection charges essential erroneousness to the principles of construction of index numbers. N. G. Pierson<sup>2</sup> and C. W. Oker<sup>3</sup> urge in strong terms the untrustworthiness of this instrumentality for measuring price variations. Their modes of presenting the subject are sufficiently distinct, but the principle in the two cases is the same, so that a single examination will suffice. Pierson's illustrations accentuate the discrepancies in the results more strongly than those of Oker. We quote from the former :

Let us suppose ten commodities, all equally important. Five of them are doubled in price, and five of them fall exactly to one half. Supposing these ten commodities to have been equally cheap or dear before the changes occurred, it is evident that their average price will have risen 25 per cent.

$$\begin{array}{r}
 \text{First period} \\
 5 \times 100 = 500 \\
 5 \times 100 = 500 \\
 \hline
 10 \overline{)1000} \\
 100
 \end{array}$$

$$\begin{array}{r}
 \text{Second period} \\
 5 \times 200 = 1000 \\
 5 \times 50 = 250 \\
 \hline
 10 \overline{)1250} \\
 125
 \end{array}$$

The index numbers in this table give a correct account of the alteration which has taken place; they show a rise from 100 to 125.

<sup>1</sup> *History of Prices*, 1885, p. 7.

<sup>2</sup> *Economic Journal*, March 1896.

<sup>3</sup> *JOURNAL OF POLITICAL ECONOMY*, September 1896.

But if we had started from the *second* period, expressing the initial prices in percentages of the prices as they were after the change, we should have found something quite different.

$$\begin{array}{r}
 \text{First period} \\
 5 \times 50 = 250 \\
 5 \times 200 = 1000 \\
 \hline
 10 \overline{)1250} \\
 125
 \end{array}$$

$$\begin{array}{r}
 \text{Second period} \\
 5 \times 100 = 500 \\
 5 \times 100 = 500 \\
 \hline
 10 \overline{)1000} \\
 100
 \end{array}$$

In this case the index numbers would have shown a fall instead of a rise.

The above criticism chronicles a fatal objection to index numbers, as they have been constructed. Professor Edgeworth,<sup>1</sup> in the same number of the *Journal*, undertakes to meet the objection; but the "Defense" is not based on a denial of Pierson's theoretical contention, but in the fact that the latter's illustrations are not typical; they are extreme hypothetical cases, created to magnify what in actual experience is an insignificant source of discrepancy.

To sum up, several of Mr. Pierson's objections amount to this one: that the calculation of average variations in prices is untrustworthy because the result is seriously different according as different systems of weighting are employed. And the objection, though true in the abstract of artificially simplified index numbers, is not true of the sets of figures with which we have actually to deal.<sup>2</sup>

Edgeworth's reply is inadequate. The objection that Pierson raises is real. The system of index numbers as constructed and used has a fundamental imperfection that vitiates the results. A slight change, however, will remedy the defect, and will enable the system to secure absolutely accurate and uniformly consistent results. Mr. Pierson himself trod on the very heels of this remedy, but it managed to elude his grasp. In speaking of his illustrations, he says:

The first table shows the effect of variations in the value of commodities of which prices were originally *equal*: the second table applies to commodities of which prices were originally *unequal*. Each percentage of a high price has a greater arithmetical importance than each percentage of a low one. But the system of index numbers takes no account of this difference.<sup>3</sup>

<sup>1</sup> "A Defense of Index Numbers."

<sup>2</sup> *Economic Journal*, March 1896, p. 136.

<sup>3</sup> P. 128.

This last sentence contains the key to the situation. Index numbers *should* take account of this difference. The defect in them springs out of this omission. It is futile to take unequal prices and deal with them as though they were equal, expecting the laws of mathematics to condone the offense. But this is just what the present system of index numbers does. It represents \$5 and \$50 and .05 indiscriminately by 100, without even an apology for the unwarranted proceeding. Now it is plain, in case of two commodities, one priced at .05 and the other at \$50, that if the former advances 100 per cent., making its price .10, and the latter remains stationary, there is not an average advance of 50 per cent., not certainly if a unit only of each commodity is considered, or the same number of units. But index numbers bring about this fantastic result as follows:

For the .05 commodity,  $200 \times 1 = 200$

For the \$50 commodity,  $100 \times 1 = 100$

$$\begin{array}{r} 2 \overline{) 300} \\ 150 \end{array}$$

or 50 per cent. average increase.

The trouble comes from representing each commodity by 100 without making compensation. How different the result if we make proper compensation. The \$50 commodity and the .05 commodity may be represented by the same number 100; but we must remember that in so doing we virtually change the unit of quantity without allowing for the change, .05 being  $\frac{1}{1000}$  of \$50, if we represent the price of the \$50 commodity by 100, we may take the same number 100 to represent the other commodity, *only* if we at the same time increase the unit of the latter to one thousandfold. The price of this thousandfold unit will then be \$50, the same as that of the first commodity. However, as we had but *one* of the smaller units, we have now to consider  $\frac{1}{1000}$  of the thousand-fold unit, and our table stands thus,

For the .05 commodity,  $200 \times \frac{1}{1000} = .2$

For the \$50 commodity,  $100 \times 1 = 100.0$

$$\begin{array}{r} 1.001 \overline{) 100.2000} \\ 100.1 - \end{array}$$

that is, the average advance for the two is not quite .1 per cent. instead of 50 per cent.

Mr. Pierson's first table gives the correct result, because he stipulates that the articles have the same initial price, so that he is justified in assigning the index number 100 to each commodity or each group. In his second table he takes the second period as the base period, but, the prices having diverged, he is not warranted in assigning the same index number to each group without making the proper compensation. We can easily readjust this table, so as to show the same average variation as the first table. The price of the first group of commodities in the second table being four times that of the second, we may consider a fourfold unit of each of this second group, and represent the price of this new unit identically with that of the first group. We now have to consider  $\frac{5}{4}$  units of the second group ( $\frac{1}{4}$  unit of each member of this group) with the following result :

$$\begin{array}{r}
 \text{1st period} \\
 5 \times 50 = 250.0 \\
 \frac{1}{4} \times 200 = 250.0 \\
 \hline
 6.25 \overline{) 500.00} \\
 \underline{\phantom{00} 80}
 \end{array}$$

$$\begin{array}{r}
 \text{2d period} \\
 5 \times 100 = 500 \\
 \frac{1}{4} \times 100 = 125 \\
 \hline
 6.25 \overline{) 625.00} \\
 \underline{\phantom{00} 100}
 \end{array}$$

This table shows the same average advance, 25 per cent., as the first table of Mr. Pierson, and is the true record of the variation.

It is plain that the trouble with index numbers arises from substituting for a set of miscellaneous prices one uniform number 100, instead of using proportionals throughout, as the inflexibility of mathematical principles enjoins. Statisticians, however, have considered it convenient to use one uniform base number, 100; and mathematics is sufficiently indulgent to permit this innovation also, but she demands rigorous compensation, as outlined above.

It will be noticed in the examples cited that a correct system of index numbers requires a strict recognition of quantity, in order to secure accurate results. Quantity is essential whether we use the schedule of actual prices or substitute index numbers.

Mr. Pierson entirely loses sight of this imperious necessity, and, in the latter part of his article, he turns hopeless pessimist on the question of computing average variations of prices by any method whatever. It would be possible, he grants, if we had one uniform standard of measure, but the inevitable variety leads to inextricable confusion and despair. By changing the unit from one of weight to bulk, Mr. Pierson finds that the transposition evokes a veritable wizard who changes plus into minus, and, by a subtle magic, transforms increase into decrease. The process is as follows:

Now let us suppose that—

100 pounds of A are equal to 1 bushel  
 100 pounds of B are equal to 0.5 bushel  
 100 pounds of C are equal to 2 bushels

Then, if each of the three articles is worth 20s. per hundred pounds, they will be worth per *bushel*,

A	-	-	-	-	-	-	20s.
B	-	-	-	-	-	-	40s.
C	-	-	-	-	-	-	10s.

Supposing commodity A to rise 25 per cent., B to fall 50 per cent., and C to rise 50 per cent., this would affect the average price as follows:

If the price is expressed per 100 pounds,

A will rise from 20 to 25s.  
 B will fall from 20 to 10s.  
 C will rise from 20 to 30s.

60 to 65s.

Which means an average rise from 100 to 108.3s. But if the price is expressed per bushel,

A will rise from 20 to 25s.  
 B will fall from 40 to 20s.  
 C will rise from 10 to 15s.

70 to 60s.

Which means an average fall from 100 to 85.7.

Thus it would simply depend on the method of expressing the price—per 100 pounds or per bushel—whether an average rise or an average fall were recorded.

I do not see my way out of this difficulty and the only possible conclusion seems to be that all attempts to calculate and represent average movements of prices, either by index numbers or otherwise, ought to be abandoned.<sup>1</sup>

<sup>1</sup> P. 131.

This trick of transposition from pounds into bushels, by which an advance is changed into a decline, is easily exposed. It is accomplished by an unavowed substitution of quantities. With the figures showing the advance from 60 to 65s., 100 pounds of each commodity are taken. When reduced to bushels the quantities vary, but Mr. Pierson, for the sake of having the quantities uniform, deliberately and naïvely makes the change without realizing its significance. Let us see the result when we adhere to the original quantities expressed in the new standard :

- 1 bushel of A rises from 20 to 25s.
- 0.5 bushel of B falls from 20 to 10s.
- 2 bushels of C rises from 20 to 30s.

---

60 to 65s.

or, of course, the identical result that Mr. Pierson finds in the first instance. This amounts simply to weighting for quantity. The quantities being 100 pounds for each commodity, when we change to bushels, we must weight A with the coefficient 1, B with  $\frac{1}{2}$ , C with 2, and the transaction may be expressed as follows :

	Coef.	Importance.	Price.
A	- 1	$\times 1 = 1.0$	@ 20s. = 20s.; 25% advance gives 25s.
B	- .1	$\times \frac{1}{2} = 0.5$	@ 40s. = 20s.; 50% decline gives 10s.
C	- 1	$\times 2 = 2.0$	@ 10s. = 20s.; 50% advance gives 30s.
			<hr style="width: 100%;"/> <div style="display: flex; justify-content: space-between;"> <span>60s.</span> <span>to</span> <span>65s.</span> </div>

Mr. Pierson's trick can be performed without transforming into bushels by simply modifying the quantity of each article so as to express the equivalence of 1 bushel, and then ignore the quantitative discrepancy. Instead of 100 pounds of each article we have by this arrangement :

100 lbs. of A command	20s.; 25% advance gives 25s.
200 lbs. of B command	40s.; 50% decline gives 20s.
50 lbs. of C command	10s.; 50% advance gives 15s.
<hr style="width: 100%;"/> <div style="display: flex; justify-content: space-between;"> <span>70s.</span> <span>to</span> <span>60s.</span> </div>	

Of course, as thus performed, the trick is no trick at all, because the change of quantities is so obtrusive that no one is deceived.

### III. THE EQUIVALENCE OF THE TWO METHODS, PRICES AND INDEX NUMBERS; THE CHARACTER AND LIMITATION OF THEIR SERVICE.

Index numbers properly constructed are as trustworthy as tables of actual prices. They are neither more nor less reliable. They give and must give proportionate results with the severe certainty of mathematical law. In case of single commodities, either method will indicate accurately the price relations among the various periods. Either method will give, for any isolated period, the correct average price of all commodities. In case the quantities of each commodity for the various periods are proportional, either method will give the correct general movement of price, giving the ratios of the average prices of all the commodities between period and period as accurately as in the case of single commodities. Both methods are powerless beyond this point. The bounds of their capacity are rigorously set at this limit. Neither method is competent when the quantities become disproportionate. We will establish these propositions by means of examples that are simple and at the same time decisive.

The first example, exhibited in Tables I to IV, involves proportional quantities. Table I is constructed of actual prices. Tables II, III, IV employ index numbers. The four tables present the same phenomena with harmonious results. Any table can be readily transformed into any other by the use of simple mathematical formulæ. The method and rationale of the changes have been already indicated. The last three tables take the first, second and third periods respectively, as base periods. To transform Table I, for instance, into IV, the third period is taken as the base period, and 100 represents the price of each commodity. As 90 (\$0.90 may be read 90c., so as to avoid the complication of the decimal point) is the actual price of wheat in the third period, 100 may be regarded as the price of  $\frac{100}{90}$  of a bushel; so that the relations of Table I will be preserved in IV if we change the unit of quantity from 1 bushel to  $\frac{100}{90}$  of a bushel, and at the same time apply a compensatory ratio to the number of units, *i. e.*, take  $\frac{90}{100}$  of 100, or 90, as the



TABLE I.

Commodity	Unit	Price	Units (Quantity)	Total value	Price	Units (Quantity)	Total value	Price	Units (Quantity)	Total value	Average price for three periods	Total units (Quantity)	Total value for three periods
Wheat ..	1 bu.	\$ .80	125	\$ 100.00	\$1.00	475	\$ 475.00	\$ .90	100	\$ 90.00	\$ .95	700	\$ 665.00
Sugar ..	1 cwt.	4.00	200	800.00	5.00	760	3,800.00	6.00	160	960.00	4.96 $\frac{1}{2}$	1,120	5,560.00
Wine ..	1 gal.	5.00	50	250.00	4.00	190	760.00	3.00	40	120.00	4.03 $\frac{1}{2}$	280	1,130.00
Totals ..			375	\$1,150.00		1,425	\$5,035.00		300	\$1,170.00		2,100	\$7,355.00
Average price of all commodities (Price of composite unit)				\$ 3.06 $\frac{1}{2}$			\$ 3.53 $\frac{1}{2}$			\$ 3.90			\$ 3.50 $\frac{1}{2}$

TABLE II.

Wheat ..	1 bu.	100	125	12,500	125	475	59,375	112 $\frac{1}{2}$	100	11,250	118 $\frac{1}{2}$	700	83,125
Sugar ..	1 cwt.	100	1,000	100,000	125	3,800	475,000	150	800	120,000	125 $\frac{1}{2}$	5,600	695,000
Wine ..	1 gal.	100	312 $\frac{1}{2}$	31,250	80	1,187 $\frac{1}{2}$	95,000	60	250	15,000	80 $\frac{1}{2}$	1,750	141,250
Totals ..			1,437 $\frac{1}{2}$	143,750		5,462 $\frac{1}{2}$	629,375		1,150	146,250		8,050	919,375
Average price of all commodities (Price of composite unit)				100			115 $\frac{1}{2}$			127 $\frac{1}{2}$			114 $\frac{1}{2}$

TABLE III.

Wheat ..	1 bu.	80	125	10,000	100	475	47,500	90	100	9,000	95	700	66,500
Sugar ..	1 cwt.	80	1,000	80,000	100	3,800	380,000	120	800	96,000	99 $\frac{1}{2}$	5,600	556,000
Wine ..	1 gal.	125	200	25,000	100	760	76,000	75	160	12,000	100 $\frac{1}{2}$	1,120	113,000
Totals ..			1,325	115,000		5,035	503,500		1,060	117,000		7,420	735,500
Average price of all commodities (Price of composite unit)				86 $\frac{1}{2}$			100			110 $\frac{1}{2}$			99 $\frac{1}{2}$

TABLE IV.

Wheat ..	1 bu.	88 $\frac{1}{2}$	112 $\frac{1}{2}$	10,000	111 $\frac{1}{2}$	427 $\frac{1}{2}$	47,500	100	90	9,000	105 $\frac{1}{2}$	630	66,500
Sugar ..	1 cwt.	66 $\frac{1}{2}$	1,200	80,000	83 $\frac{1}{2}$	4,560	380,000	100	960	96,000	82 $\frac{1}{2}$	6,720	556,000
Wine ..	1 gal.	166 $\frac{1}{2}$	150	25,000	133 $\frac{1}{2}$	570	76,000	100	120	12,000	134 $\frac{1}{2}$	840	113,000
Totals ..			1,462 $\frac{1}{2}$	115,000		5,557 $\frac{1}{2}$	503,500		1,170	117,000		8,190	735,500
Average price of all commodities (Price of composite unit)				78 $\frac{1}{2}$			90 $\frac{1}{2}$			100			89 $\frac{1}{2}$

number of the new units,  $\frac{1}{9}$  bushel  $\times 90 = 1$  bushel  $\times 100$ . This, of course, gives the identical total value, 9000. Likewise with sugar and wine. Sugar rated at 600 per cwt. is equivalent to a rating of 100 per  $\frac{1}{6}$  cwt. And dividing the unit into six units increases the number of units sixfold, or 160 becomes 960. In case of wine, 100 substituted for 300 as the unit price changes the unit of quantity from 1 gallon to  $\frac{1}{3}$  gallon, and the number of units from 40 to 120. The *price* columns and the *number-of-units* columns of the various periods sustain the same ratios between the two tables as those of the base periods.

Table III is constructed on the same plan as Table IV, the base period being the second instead of the third. The total value columns of I, III, IV are identical, as logically they should be. Table II exhibits a variation in this respect, as it is constructed on a slightly different plan, to show that different methods may be employed, if the application of principle is rigorous. In Table II, instead of changing the unit of quantity from 1 bushel to  $\frac{1}{4}$  bushel for wheat, to compensate for the substitution of 100 for 80 in the price, the unit 1 bushel is retained, which necessitates the retention of 125 as the number of units. This raises the total value to 12,500. Now every individual transformation of this table must take account of this arbitrary manipulation of the price of wheat. This is done, in case of sugar, by changing the unit of quantity to  $\frac{1}{4}$  cwt., instead of  $\frac{1}{6}$  cwt., when 100 is substituted for 400 in the price column. This preserves the proportions between the corresponding data for wheat and sugar.  $1 : \frac{1}{4} :: 400 : 80$ . That is, if 80 and 400 are each to be represented by 100, and the unit of the 80 commodity to remain unchanged, then, to preserve the original relations, the unit of the 400 commodity requires to be divided into 5 units. Of course, the number of units for sugar must be increased fivefold. A simpler way to get at this transformation is to increase the figures in the price columns of Table I 25 per cent. uniformly. Then the transformation is reduced to the method employed with III and IV. This is equivalent to changing the unit of value. If 80 is replaced by 100, that means that we

have 100 *eight tenths-of-a-cent* units instead of 80-cent units, so that the increased figures do not change the original values. The total value columns have their figures increased 25 per cent. That is, instead of 80, we have 100; instead of 400 we have 500, or  $\frac{5}{4}$  instead of 1. But the unit is reduced by the same ratio. Instead of 1c. the unit is  $\frac{4}{5}$ c., so that the corresponding columns in the two tables express identical values. This transformation is more complicated than the other, because it involves a change in the unit of value as well as changes in the units of quantity. It is given merely as an indication of the protean possibilities of systems of index numbers.

The point of vital importance in these tables, is the absolute correspondence. Not only do the prices of the single commodities for the various periods and their averages exhibit the same proportions in all the tables, but the average prices of all the commodities for any single period, and the general averages are rigorously proportionate. Test the results of Tables I and II:

	1	2	3	General average
Averages by Table I	3.06 $\frac{1}{2}$	3.53 $\frac{1}{2}$	3.90	3.50 $\frac{1}{2}$
Averages by Table II	100	115 $\frac{1}{2}$	127 $\frac{1}{2}$	114 $\frac{1}{2}$
$\frac{100}{3.06\frac{1}{2}} = \frac{115\frac{1}{2}}{3.53\frac{1}{2}} = \frac{127\frac{1}{2}}{3.90} = \frac{114\frac{1}{2}}{3.50\frac{1}{2}} = \frac{15}{46}$				

or, taking the ratios between corresponding periods, including the general average, in the two tables, we have

$$\begin{aligned} \frac{3.53\frac{1}{2}}{3.06\frac{1}{2}} &= \frac{115\frac{1}{2}}{100} = \frac{53}{46} \\ \frac{3.90}{3.06\frac{1}{2}} &= \frac{127\frac{1}{2}}{100} = \frac{117}{92} \\ \frac{3.50\frac{1}{2}}{3.06\frac{1}{2}} &= \frac{114\frac{1}{2}}{100} = \frac{1471}{1288} \end{aligned}$$

Similar relations exist between any two tables. The movement of price is indicated with absolute uniformity and unerring accuracy by all the tables.

In the case of disproportionate quantities there is a different story to chronicle. In order to present striking results, let us follow Professor Pierson's plan of supposing cases that exhibit

TABLE V.

Commodity	Unit	Period 1			Period 2			Av. price for three periods	Total units (Quantity)	Total value for three periods
		Price	Units (Quantity)	Total value	Price	Units (Quantity)	Total value			
A.....	1 bu.	\$ .05	X 10 =	\$ .50	\$ 1.00	X 73 =	\$ 73.00	\$ .30	X 1055 =	\$ 316.50
B.....	1 cwt.	20.00	X 5 =	100.00	34.00	X 1 =	34.00	5.00	X 110 =	550.00
C.....	1 gal.	2.00	X 84 =	168.00	.50	X 24 =	12.00	4.00	X 115 =	460.00
Totals.....			99	\$268.50		98	\$119.00		1280	\$1,326.50
Average price of all commodities } (Price of composite unit)				\$ 2.7144			\$ 1.2144			\$ 1.03,100h

TABLE VI.

A.....	20 bu.	100	X 1 =	50	2000	X 34 =	7,300	500	X 4844 =	24,300	600	X 5244 =	31,650
B.....	10 cwt.	100	X 100 =	10,000	170	X 20 =	3,400	20	X 2080 =	41,600	25	X 2200 =	55,000
C.....	1/2 gal.	100	X 168 =	16,800	25	X 48 =	1,200	2000	X 14 =	28,000	200	X 230 =	46,000
Totals.....			2684	26,850		7144	11,900		214244	93,900		248244	132,650
Average price of all commodities } (Price of composite unit)				100			167444			434444			534444

TABLE VII.

A.....	1 bu.	5	X 10 =	50	100	X 73 =	7,300	25	X 972 =	24,300	30	X 1055 =	31,650
B.....	1/4 cwt.	5844	X 170 =	10,000	100	X 34 =	3,400	1144	X 3536 =	41,600	1444	X 3740 =	55,000
C.....	2 gal.	400	X 42 =	16,800	100	X 12 =	1,200	8000	X 34 =	28,000	800	X 574 =	46,000
Totals.....			222	26,850		119	11,900		45114	93,900		48524	132,650
Average price of all commodities } (Price of composite unit)				120444			100			204444			274444

TABLE VIII.

A.....	4 bu.	20	X 24 =	50	400	X 184 =	7,300	100	X 243 =	24,300	120	X 2634 =	31,650
B.....	1/2 cwt.	500	X 20 =	10,000	850	X 4 =	3,400	100	X 416 =	41,600	125	X 440 =	55,000
C.....	1/2 gal.	5	X 3360 =	16,800	14	X 960 =	1,200	100	X 280 =	28,000	10	X 4600 =	46,000
Totals.....			33824	26,850		9824	11,900		939	93,900		53034	132,650
Average price of all commodities } (Price of composite unit)				744444			124444			100			254444

extraordinary variations. They are collected in Tables V to VIII. Table V exhibits the phenomena by means of actual prices. Tables VI, VII, VIII employ index numbers, the base period moving from 1 to 2 and then to 3, in the successive tables. These tables are constructed after the simple plan of Tables III and IV, so that the total value columns of the four tables are identical. As in the first set of tables, we have the variations of prices for the single commodities exactly corresponding in the four tables. We may note also that the average prices for each period are correctly computed, since any average substituted for all the prices averaged will not change the aggregate of the total value column in that period. But these latter averages have no further significance. There is no correspondence between the tables. Let us place the four sets in parallel rows:

	1	2	3	General average
Averages by Table V	2.71 +	1.21 +	.86 +	1.03 +
Averages by Table VI	100	167 +	43 +	53 +
Averages by Table VII	120 +	100	20 +	27 +
Averages by Table VIII	7 +	12 +	100	25 +

Comment on this exhibit is superfluous. The marked discrepancy of the ratios—the ratios corresponding to those that are absolutely uniform in the first set of tables—shows beyond question that the movement of general prices cannot be accurately drawn, when the quantities are disproportionate.

The rationale of this result is not far to seek. The average price for any period may be taken as the price of a composite unit. For instance, in Table V, period 1, the average price, \$2.71 $\frac{2}{3}$  may be taken as the price of a composite unit made up of  $\frac{1}{3}$ ,  $\frac{5}{9}$ , and  $\frac{2}{3}$ , respectively, of the conventional units of A, B, C. In period 2 of the same table, the composite unit corresponding to the average price, \$1.21 $\frac{2}{3}$ , has for its constituent elements  $\frac{7}{9}$ ,  $\frac{1}{9}$ ,  $\frac{2}{3}$ , respectively, of the same conventional units of A, B, C. These two composite units are strikingly diverse. The one contains, as compared with the other

$\frac{1}{3}$	against	$\frac{7}{9}$	of the conventional unit of	A
$\frac{5}{9}$	"	$\frac{1}{9}$	"	B
$\frac{2}{3}$	"	$\frac{2}{3}$	"	C

They are thus obviously dissimilar units, and no inference can be drawn as to the movement of price between the two periods. Similar divergence applies to all the composite units of this second set of tables. No two units are alike; hence no significant comparison between their prices can be drawn.

Let us turn now to the first set of tables. Table I, period 1, has a composite unit consisting of  $\frac{1}{3}\frac{2}{3}$ ,  $\frac{2}{3}\frac{2}{3}$ ,  $\frac{5}{3}\frac{0}{3}$ , respectively, of 1 bushel of wheat, 1 cwt. of sugar, 1 gallon of wine. For period 2, the ratios are  $\frac{475}{1425}$ ,  $\frac{760}{1425}$ ,  $\frac{190}{1425}$ . These ratios are the same as those of period 1, for

$$\begin{aligned}\frac{125}{375} &= \frac{475}{1425} = \frac{1}{3} \\ \frac{200}{375} &= \frac{760}{1425} = \frac{8}{15} \\ \frac{50}{375} &= \frac{190}{1425} = \frac{2}{15}\end{aligned}$$

That is, the composite units for these two periods are identical, containing each  $\frac{1}{3}$  bushel of wheat,  $\frac{2}{3}$  cwt. of sugar,  $\frac{2}{3}$  gallon of wine. The third period obviously has the same composite unit. Hence the average prices are prices of the same units or things, and comparisons are legitimate. The same is true of the three index tables of this set, and it must be true of all tables of proportionate quantities that are correctly constructed.

In the first set of tables, the periodic averages are of identical units; in the second set, they are of diverse units. In the former case, the composite unit, being constant through the various periods, may be regarded as the unit of a constructive single commodity, and its variations in price are amenable to the same laws with those of any single commodity. In fact, for our purpose, such a commodity, or constructive commodity, belongs to the same category as, say, lead-pencils, knives, spectacles, sewing-machines, a thousand and one articles which are composite, but have a stable association of their parts.

In the second set of tables, the composite unit is exceedingly unstable. It varies from period to period in every table, and the variations are so radical that comparison of prices is absurd.

One might as well talk of the movement of prices in the case of two periods, one of which shows an exclusive business in cattle, the other in railway ties. Nevertheless we need not go as far as Professor Pierson, even in the case of disproportionate quantities, and abandon the enterprise entirely. The hypothetical case of our tables is not typical in the sense of fairly representing the changes of any actual observation. It has served its purpose in substantiating the claim that general movements of prices cannot be accurately measured. But there can usually be an approximate measurement, the approximation becoming near or remote as proportionality among the quantities advances or recedes. If the quantities are fairly proportional, the method of Sauerbeck, Edgeworth, Marshall, and others may be employed, namely, the application of the quantities belonging to some one period, the initial, final or mean period, to all the periods uniformly. This method should usually give approximate results. Similar approximation may be secured without disturbing the actual quantities. The averages for each period may be accurately obtained. These averages, as explained above, will relate to diverse units, but these units will be approximately uniform to the same degree that the quantities are proportional, or approach proportionality.

It may be said in closing that there need be no lack of occasions to utilize the services of price tables in perfectly trustworthy operations. All enterprises that aim at ascertaining the periodic ratios of real wages of laboring or other classes are movements in the right direction. The budget method of Dr. Falkner and others, involving the consideration of constant quantities, should secure accurate results. Besides, the spirit of such an enterprise appeals to the approbation of all who are actuated by philanthropic motives.

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## REASONABLE RAILWAY MAIL PAY.

IN a previous article on railway mail compensation I intimated that at a later time I hoped to discuss what may be considered "fair" pay for the transportation of mail. As an elaborate discussion of this question has just been submitted to the postal commission by Professor Henry C. Adams I shall forego an extended statement of my own ideas and content myself with a review of his testimony.<sup>1</sup>

### I.

Before stating the fundamental principles which should govern rate making Professor Adams thought it necessary to clear the field of certain preconceptions on this subject that seem to have become firmly rooted in the minds of many witnesses and of several of the members of the commission. With but few exceptions the witnesses who appeared before the commission based their judgment of the reasonableness of the mail pay on the cost of rendering the service. One representative of the railroads after another contended that the present compensation is not excessive, because it costs nearly as much to carry the mail as the railroads receive from the government for performing the service. The line of argument, adopted by the railroads, is difficult of explanation, for the accounting officers of the railways have more than once placed themselves on record that it is impossible to separate accurately even passenger train from freight train expenditures and consequently they would concede that an attempt further to distribute the cost of running passenger trains to mail, express, and passengers would be even more unsatisfactory. Perhaps the men who represented the railroads before the commission were not familiar with railway accounting. But it also occurred to me, as I read the testimony, that the railway men may have attempted to justify the compensation they received on the basis of cost of service because they felt that this was the line of argument the majority of the commission wanted. And whatever may be said of their attempts from a theoretical standpoint all will have to admit that the arguments, based on the cost of

<sup>1</sup> Professor Adams's testimony may be found in the *Report of the Joint Congressional Commission on Postal Affairs*. This report has not yet appeared in its final form, so the page cannot be cited.



service, were the ones that found favor with the commission. Indeed some members of the commission found it difficult to give a respectful hearing to those who were not prepared to state just how much it cost to haul a ton of mail a mile.

While admitting, that the simplicity of the rule that rates should approximate the cost of service makes it attractive, Professor Adams declared that he could not accept the doctrine that reasonable rates must approximate the cost of service because, (1) it is impossible to ascertain the cost of service with sufficient accuracy for this purpose, and (2) because the railways do not attempt to adjust the rate on any commodity to the cost of moving that particular commodity.<sup>1</sup> His explanation of why it is impossible to find out how much it costs to perform a certain service is very convincing.

After having disposed in this summary way of the arguments based on the cost of service Professor Adams, for the time being, passes over the statements of the railroad men whose arguments are based on comparisons,<sup>2</sup> and presents his "fundamental principles relative to railway mail compensation." He says, quoting his words as far as possible, that the points which will be submitted in connection with a consideration of the fundamental principles relative to railway mail pay are (1) that European experience relative to railway mail transportation is not pertinent to the United States, (2) that the problem of railway mail pay must be approached as one of compensation, that word being given its regular interpretation, (3) that in view of the nature and history of the postal service the claim of public utility in determining what is reasonable compensation cannot be ignored, and (4) that the possibility of introducing economies into the business of transportation, depends upon the increase in the volume of traffic, from which, in the absence of countervailing considerations, it follows that a form of traffic which increases most rapidly through a series of years should show a relatively more rapid decrease in charges [charges] as compared with other traffic.

## II.

Now let us examine these fundamental principles. Professor Adams says in explanation of the first one that "Very little can be

<sup>1</sup> *Testimony taken by the Joint Congressional Commission on Postal Affairs in the winter of 1899*, pp. 4-7.

<sup>2</sup> Most of the railroad men compared their earnings from mail with those from express. This was the favorite comparison, it being held that the two services were similar in many respects.

gained from European experience respecting the questions of compensation to railways for transporting mail on account of the fact that, for one reason or another, European governments are interested in the financial success of the railways. Where the railways are the property of the government, as in Prussia, every item of railway expenditure appears as an appropriation in the budget of the state, and it is merely a matter of accounting, so far as the people who pay taxes and railway charges are concerned, whether the railways transport the mail for nothing, and thus enable the post-office department to show a surplus, or whether the post-office department is charged an arbitrary rate for carrying the mail, which would enable the railway department to increase the surplus by that amount.<sup>1</sup>

If by European experience Professor Adams means simply continental practice no one, I believe, will be disposed to find fault with his contentions. But, popularly at least, Great Britain forms a part of Europe and, therefore, Professor Adams should not have directed his investigation simply to the continent of Europe. In Great Britain the relations of the post-office department and the railroads are very much the same as in this country. In both countries there is private ownership of railways. And further, our principles of jurisprudence do not depart greatly from those of English jurisprudence. Because of these considerations it seems to me especial attention should have been directed to the manner in which the British government deals with the railways. And failing to find in Great Britain sufficient confirmation that the payments of our government are either too high or too low Professor Adams could much more profitably have turned his attention to Canada than to the continent of Europe. Having thus neglected the practice of those countries whose national and industrial life are adjusted to the same principles as our own, I cannot regard Professor Adams's treatment of his first point as satisfactory.

Although not much can be learned from British practice as to what constitutes reasonable compensation in dollars and cents, a great deal can be learned as to what is a fair method of ascertaining that to which the railways are entitled. In this country the schedule of pay is fixed arbitrarily by act of Congress. I say arbitrarily because the railways have no direct voice in determining the payments. In Great Britain on the contrary, they participate in fixing the payments, for any company which does not regard the payments awarded by the

<sup>1</sup> *Ibid.*, p. 7.

postmaster-general as adequate, can call arbitrators. The nineteenth section of the Act of 1838 reads:

Every railway company shall be entitled to reasonable remuneration for any services performed by them in pursuance of this act with respect to the conveyance of mails, and such remuneration shall be paid by the postmaster-general. And any differences between the postmaster-general and any railway company as to the amount of such remuneration, or as to any other question arising under this act, shall be decided by arbitration<sup>1</sup> in the manner provided by the act of the session of the first and second years of the reign of her present majesty, chapter XCVIII, or, at the option of such railway company, by the [railway] commissioners.\*

In regard to specific information as to what is regarded as fair pay for conveying the mail but little information is obtainable, for in Great Britain the postmaster-general does not make public the contracts he enters upon with each of the railways. During the summer of 1898, the second-assistant postmaster-general, W. S. Shallenberger, was sent abroad by Postmaster-General Charles Emory Smith to make a careful investigation into the character and cost of railway mail transportation. In reporting to the postmaster-general what he learned in Great Britain, Mr. Shallenberger says:

"In reply to a question as to what was regarded a reasonable compensation for a mail train, I was told that it must not in any event exceed the revenue derived by the railway company from an average passenger train of like size. . . . One of the contracts that I was permitted to see provided that the postmaster-general and his officers may require the company to provide and run any express or special trains for the conveyance of mails, etc., for a payment at the rate of 3s. 6d. for each and every mile such express or special *train* shall travel. This would be at the rate of 85 cents per running mile. In the testimony given by this office before the subcommittee of the Senate Committee on Appropriations, in May last, the cost per running mile of one of our full railway post-office *cars* including transportation pay, was estimated at 25 1/2 cents. Considering the small size and light weight of the cars on English roads, it is perhaps fair to assume that three of our full [sized] railway post-office cars would equal the average special train provided for in the contract which I have named.<sup>2</sup>

<sup>1</sup> In case the postmaster-general and a railway company cannot agree as to what is fair compensation they may refer the matter to the award of two persons, one to be named by the postmaster-general and the other by the company, and if these two persons cannot agree, then to a third person, to be appointed by the first two previously to their entering upon the inquiry.

\* *Report of Postmaster-General*, 1898, p. 318.

<sup>2</sup> *Ibid.*, p. 320. The italics are mine.

If the terms of the contract just cited are typical, it appears that the compensation given the railroads in Great Britain for running special mail trains is somewhat higher than it is here. In comparing payments it must also be held in mind that in Great Britain the conditions of the service are not so onerous as here. In Great Britain the post-office department erects and maintains at its own expense all mail cranes and catchers, the railways are also relieved from conveying the mails to and from the post offices, and when railway post-office clerks are injured in railway accidents, and judgment is obtained against the company, the post-office department is liable at least for one half the damage, and finally, but most important of all, the railways are not expected to run their mail trains at a higher rate of speed than their best passenger trains maintain.<sup>1</sup>

In Canada, as in Great Britain, the railways are not paid on the basis of the average weight carried, so no direct comparisons on the basis of weight can be made with our payments. From information collected in the autumn of 1898 for the postal commission by Mr. V. J. Bradley, superintendent of the railway mail service of the New York post office, it appears that the cost per mile of railway mail transportation in Canada, regardless of facilities furnished or weight carried, was 8.9 cents.<sup>2</sup> In the United States for the fiscal year 1898 it was 10.93 cents.<sup>3</sup> Although on its face this comparison seems unfavorable to our railways, it is in reality very favorable. This is true for several reasons. In the first place Mr. Bradley, in ascertaining the average amount paid in Canada per mile for railway mail transportation, did not include the payment of about \$650,000 to the Canadian Pacific by the imperial government for the overland transmission of mail to the Pacific.<sup>4</sup> In the second place, the average weight of mail carried in Canada is insignificant in comparison with the average weight transported here. In this country most of the railways radiating from the large cities run fast mail trains, exclusively devoted to mail, while in Canada there are no fast mail trains, and in fact there is but a single route on which full railway post-office cars are

<sup>1</sup> *Ibid.*, p. 319.

<sup>2</sup> *Testimony taken by the Joint Congressional Commission on Postal Affairs in summer and autumn of 1898*, p. 729.

<sup>3</sup> *Report of the Postmaster-General, 1898*, p. 301.

<sup>4</sup> *Testimony, etc., 1898*, p. 728.

run.<sup>1</sup> It thus appears that for baggage and apartment car service the railways of Canada receive almost as much per mile as our railways receive for service that consists largely of full sized post-office cars and full trains. In Canada the conditions under which the railways transport the mail are not so burdensome as in this country. There, as a general rule, the side and terminal messenger service is performed by the post-office department at its own expense. In case the railroads perform this service they generally receive extra compensation for doing it. In Canada the railways are also almost wholly relieved from the portage of the mails at the stations. The railways render some assistance, but about 90 per cent. of this work is done by postal employees. At stations where transfer agents are assigned by the post-office department they do not merely supervise the transfers, as in this country, but lug the mail as well.\*

### III.

Now let us pass on to Professor Adams's second fundamental principle for determining what is fair pay for transporting the mail. In his testimony before the postal commission he says:

The next point is that the problem of railway mail pay must be approached as one of compensation, that word being given its regular interpretation.

\* \* \* \* \*

The service rendered by the railways in carrying the mail is of the same sort as that of carrying passengers, express, or freight. The fact that in the case of mail the government is the agency through which the service is rendered does not change the nature of the service. Such I understand to be the principle that must be recognized by your commission. This is implied in the Constitution itself, and has been expressed in many state decisions. Much testimony might be submitted to show that the above situation is correct, and that consequently the principle of compensation should be acknowledged in discussing the question of adequate pay. . . . In 1874 a select committee of the United States senate was appointed to inquire into "the nature and extent of the obligations subsisting between the railway companies and the postal service of the country." This committee came to the conclusion that the government can compel them [the railways] to transport the public mails, but that "reasonable and just compensation should be paid

<sup>1</sup> This is the Montreal-Toronto route, which is 33½ miles in length. The cars on this route are forty feet in length, and there are two round trips made daily except Sunday, when a single round trip is made. To maintain this service seven cars are furnished, four in use and three in reserve.— *Ibid.*, p. 726.

\* *Ibid.*, pp. 726, 727.

for such service." In this regard, as also in the case of condemnation of a railway which refuses to carry the mail, the argument of the committee proceeded upon the principle enunciated by the fifth section of the amendments to the Constitution, which reads: "Nor shall private property be taken for public use without just compensation." It seems evident, then, that the question of railway pay for postal service among peoples who enjoy English jurisprudence is a question of compensation, and that all those principles of law and political science that cluster about the word "compensation" are pertinent, to a greater or less degree, to the problem in hand.<sup>1</sup>

Probably no one will be disposed to question Professor Adams's second fundamental principle, and probably there are but few who would dignify the simple contention "that the problem of railway mail pay must be approached as one of compensation," by calling it a fundamental principle. It seems to me Professor Adams might fairly have assumed that the members of the postal commission would freely grant that "the principle of compensation should be acknowledged in discussing the question of adequate pay," for compensation and adequate pay mean the same thing. All are agreed, I believe, that the railways should receive compensation or adequate pay for the services they render. From the questions put to the witnesses who appeared before it, it may be fairly inferred that the postal commission from the very beginning of its investigations granted the contention that Professor Adams labors to establish, for it began at once to search for information as to what is reasonable pay for carrying the mail.

#### IV.

The first two fundamental principles laid down by Professor Adams do not shed much light upon what is reasonable pay for transporting the mail. They in reality merely prepare the way for the introduction of the third and fourth principles which contain the meat of what Professor Adams has to say on what is reasonable compensation.

Passing from his second to his third principle, Professor Adams says:

The third point found under the general heading "Consideration of fundamental principles relative to railway mail compensation," is as follows: The commission cannot in view of the nature and history of the postal service, ignore the claim of public utility in determining reasonable compensation. . . . This consideration assists the solution of the problem in

<sup>1</sup> *Testimony, etc.*, 1899, pp. 8 and 9.

three ways. First, it suggests the correct classification of the mail service among the several transportation services.

\* \* \* \* \*

The railways undoubtedly have the right to insist, from their point of view, that the character of the facilities furnished for the mail service should be taken into account in fixing compensation, and the government is obliged to recognize this claim because they who invest in railway property are a part of the state whose private interests are included in the interests which the state must guard ; but, on the other hand, the government has the right to insist that the transportation of mail is essential, not alone to the present advantage of the public, but to the healthful and permanent development of the state. It has the right openly, publicly, and without apology, to put in practice a rule acknowledged by railway management. A railway manager is willing, for example, to carry coal at a very low rate, even at the risk of incurring loss, because he knows that coal is potential industrial development and what he loses on the coal traffic becomes for him a gain on the transportation of high-class freight, the product of the mills and factories which the distribution of the coal renders possible.

\* \* \* \* \*

This line of reasoning is, even in a higher degree, pertinent to the transmission of intelligence, because intelligence is an essential consideration for growth and development. As the distribution of coal, which is latent manufacturing power, is essential to the upbuilding of manufactories, so the diffusion of intelligence is a fundamental condition of all social and industrial evolution. The meaning of all this is evident. When the government, in considering the question of compensation for carrying mail, finds it necessary to classify the mail service in the general schedule of services rendered, it will, if it accept the principle of public utility as the ruling consideration, conclude that the transportation of mail should be classed among those services which minister to the development of the process of production rather than to the satisfaction of wants through the transportation of the products. From the social point of view there is a difference between the carrying of mail and the carrying of coal, and it is right that a schedule of rates conforming to the principle of public utility should recognize this difference. But of all things transported by rail intelligence is the most essential to social and economic advantage and therefore is in the highest degree amenable to the consideration of public utility.

\* \* \* \* \*

This principle of public utility will, in the second place, be of assistance in bringing such action as the commission deems wise into harmony with the generally accepted rule relative to reasonable railway transportation.

Now the practical effect of that point of view, if conceded, would be, I think, to recognize that from the public point of view we have a right—the government has a right—to force the mail compensation rather low, provided it does not force it so low that the question of compensation ceases to be a question of compensation and becomes a question of taxation, and the most that statistics can do in this matter is to set up the broad mark between those two lines.

\* \* \* \* \*

The private interest in railway charges is limited to the claim that the gross revenue of railways should be adequate to cover operating expenses, fixed charges, and a fair return to stockholders. But this amount having been guaranteed the manner in which this gross amount is to be collected from the shippers is a matter of public policy, and you can readily see how this view of the case clears the ground for such action relative to compensation for carrying the mail as may commend itself to Congress. The application of the principle of public utility classifies mail transportation with freight: it classifies it among the fundamental or social services of railways, and it justifies an unusually low rate upon mail transportation, provided this is essential to rendering the important service undertaken by the postal department, and provided that the railways are permitted to recoup themselves by higher rates from other relatively less important services.

\* \* \* \* \*

The third scope of this principle of public utility is, that the combination of the idea of public utility with that of compensation emphasizes the distinction to be made later between the transmission of intelligence which is a primal postal function, and the transmission of merchandise or bulky literary products, which as a postal function is of comparatively recent development.<sup>1</sup>

\* \* \* \* \*

While I cannot agree with all that Professor Adams puts forth in his third fundamental principle, yet most of his statements may well be accepted. The cost of service theory of rate making is abandoned. And as would be expected, he assumes that it is impossible to pass upon the fairness of any railway charge independently of the other rates with which it forms a system. In other words he contends that the whole classification must be examined before it is possible to pass judgment upon any particular rate. He premises that a railway company is entitled to a fair return upon the value of its property. And that the problem to be solved is the proportion in which the different commodities transported by the railway shall be called upon to contribute to this end. Or in other language how are the services

<sup>1</sup> *Ibid.*, pp. 9-11.



rendered by the railways to be classified? He declares that the "social services" should be performed at unusually low rates. After stating his theory of rate making he says "The application of the principle of public utility classifies mail transportation with freight: it classifies it among the fundamental or social services of railways, and it justifies an unusually low rate upon mail transportation." From this statement it must be inferred that in Professor Adams's grouping of the services rendered by the railways there are some which are not social. At this point I depart from Professor Adams. All the services rendered by railways are social services.

It appears to me that Professor Adams's theory is also incomplete. As I have before stated I regard all the services performed by the railways as social services. And I would advance as a fundamental proposition that the rates on these services should be so adjusted as to make the railways promote the public welfare in the largest possible degree it being understood that railway investors are first of all entitled to a fair return upon their property. In the presentation of his fundamental principles Professor Adams takes, or at least appears to take, a one-sided view of the situation. In a certain sense he looks upon railway property and employees as outside of the social community but ministering to it. And consequently in rewarding the railways for services rendered, he says, society is to consider merely the importance of the service to itself and then fix the compensation on the basis that services of great social importance should be done at very low rates. This view appears to me to be unsatisfactory. Railway property and employees are a part of the community and, therefore, the cost of performing a service in labor and capital must also be considered. That is, society is interested in net results. To make my point clear let me illustrate. Suppose that at station A for productive purposes a ton of coal is equal to a cord of wood but that the cost in labor and capital of transporting a cord of wood from station B to station A is twice that of hauling a ton of coal.<sup>2</sup> Obviously it would be greatly to the interest of society as a whole for the people at station A to use coal and therefore a system of rates based solely on the utility of coal and wood to the people at station A would not result in the most effective use of the railroads to society as a whole. Professor Adams may reply to this argument that my theory is of no practical value because it is impossible

<sup>2</sup> It must not be supposed, that in practice it is possible to speak with this definiteness.

to ascertain the cost of moving different commodities. In answer to this contention I would say while it is freely admitted that it is impossible to accurately ascertain what it costs to render any particular service yet in most cases it is possible to estimate approximately what is the relative cost of transporting different commodities.<sup>2</sup> At least with accuracy enough to promote greatly the effective use of railways. This contention Professor Adams has, at least in a measure, admitted.

The ground upon which I differ from Professor Adams is also in part the ground upon which I differ from Mr. Cowles. In his *General Freight and Passenger Post* Mr. Cowles contends that distance should be disregarded in fixing freight and passenger rates. In my opinion it should not be, for if it were the railroads would not be used most effectively. My assertion is based upon the ground that while we may not be able to tell exactly how much more it costs to haul a ton of freight 110 miles than it does to haul it 100 miles yet we do know that under exactly similar conditions it costs some more, and that under the same conditions it costs much more to haul a ton of coal 1000 miles than 100 miles and that, therefore, a system of rates which makes it indifferent to a shipper whether he sends his products 100 or 1000 miles does not result in the greatest good to society.

It is one thing to enunciate a general principle, but it is quite another matter to apply this principle. Professor Adams declares that railway rates should conform to the principle of public utility, but makes no attempt to classify according to this principle even the most important of the many commodities carried by the railways. In one place he states that the practical effect of the adoption of his principle would be "to force the mail compensation *rather low*,"<sup>3</sup> and in another place he asserts with certain provisos that "the application of the principle of public utility . . . justifies an *unusually low* rate on mail transportation."<sup>3</sup> And in still another place he declares that "of all things transported by rail, intelligence is the most essential to social and economic advantage, and therefore is in the highest degree amenable to the consideration of public utility."<sup>4</sup> This contention is

<sup>2</sup> I do not, however, hold that it is possible to estimate the cost of performing different services with sufficient accuracy to base a theory of rates on the cost of service even assuming that it is desirable to do this.

<sup>2</sup> *Testimony*, etc., 1899, p. 10.

<sup>3</sup> *Ibid.*, p. 11. The italics are in both cases mine.

<sup>4</sup> *Ibid.*, p. 10.

a debatable one. First of all come the physiological wants of man, that is, his necessities as an animal. Food, raiment, and shelter, man must have. I am therefore inclined to rank freedom of personal movement higher than I am the rapid diffusion of intelligence, for the former, it seems to me, promotes the acquisition of these things more than the latter does. For instance, the ability to move from the unproductive lands of New England to the fertile lands of the central West has resulted in greater economic and social advantage to the country than any quantity of literature circulated in New England on the subject of improved farming could have brought about.

A full discussion of the construction of a schedule, based on the principle of public utility, will not be attempted here. But before leaving this point I would like to raise the question as to whether or not the thoroughgoing application of the principle of public utility to rate making would radically change existing railway tariffs. Very likely the framers of such a schedule of railway rates would quickly meet the difficulties encountered by legislators in drawing up tariff bills. They would probably early discover that in order to raise sufficient revenue to sustain the railways it would be necessary to rely very largely upon the commodities which are essential to social and economic well-being, just as legislators have found that if sufficient revenue is to be raised, the necessities of life must be the main reliance of governments. Just how much the public would profit by the systematic application of Professor Adams's third fundamental principle of rate making, can be estimated only after the most painstaking and exhaustive study of existing rate schedules, and such an examination has not yet been made.

Perhaps the application of the principle of public utility would not greatly alter existing railway tariffs, for another reason. The better class of railway managers now fully realize that their welfare is dependent upon that of the people whom they serve, and it may be that an examination of railway schedules would show that railway men in adjusting their rates have been guided, in some measure at least, by this principle. That such is the case is admitted by Professor Adams. Brick, stone, lumber, coal, coke, ores of the base metals, and food products consumed by the masses are carried at low rates. Luxuries, on the other hand, pay high rates. In other words, the articles consumed productively are favored by railway managers, while those consumed unproductively are discriminated against. This is in consonance with Professor Adams's principle of public utility.

Although the principle of public utility is applied to the movement of freight, it is applied much more thoroughly to the transportation of passengers. As rates are now adjusted very few railroads in the United States obtain any net returns from their passenger train service, and the great bulk of the railways would probably be better off if they altogether removed their passenger trains, provided their freight train earnings were not affected. During the year 1898 the average revenue per train mile earned by the passenger trains of the United States was \$.974, while the average revenue per train mile earned by the freight trains was \$1.731, and the average cost of running all trains per mile was \$.956.<sup>1</sup> While the cost of running freight and passenger trains, respectively, cannot be ascertained with exactness, it is generally estimated that it costs as much per mile to run passenger as freight trains. If this is true passenger trains contribute almost nothing to the fund for the payment of interest on bonds and dividends to stockholders.<sup>2</sup> As the passenger train mileage of all our railways does not fall far short of that of freight trains<sup>3</sup> it is seen that the principle of public utility has already been widely applied in fixing railway charges. This follows because those services which in the largest measure promote social well-being, namely, the transportation of passengers and mail, are performed by the railways at less than cost. I say less than cost, because the passenger trains contribute almost nothing to the payment of interest and dividends.

It being granted that the movement of passengers and mail is the most important of the services rendered society by the railways, and as it must be conceded that they are carried at less than cost, Professor Adams must admit that the principle of public utility is now applied to railway charges. And consequently all that remains for discussion is the question whether or not the principle is applied with sufficient thoroughness. According to the limitations he has himself placed upon the application of his principle the limit has been passed, for he says the practical effect of the adoption of the principle of public utility would be that

<sup>1</sup> *Statistics of the Railways of the United States, 1898*, p. 93.

<sup>2</sup> The statement just made of the average cost of running trains does not include these items. It is thus misleading.

<sup>3</sup> During the year 1898 the aggregate passenger train mileage was 341,526,769, and the aggregate freight train mileage 503,766,258. *Ibid.*, p. 69.

We have a right — the government has a right — to force the mail compensation rather low, provided it does not force it so low that the question of compensation ceases to be a question of compensation and becomes a question of taxation, and the most that statistics can do in this matter is to set up the broad mark between these two lines.<sup>1</sup>

If it be granted that passenger train earnings should not be forced still lower than they are now, all that remains for discussion is the proportion in which the traffic moved on passenger trains should be made to contribute to the support of the passenger train service.

If the diffusion of intelligence and the movement of passengers are of about equal social importance, then, according to the principle of public utility, they should contribute in a like ratio to the maintenance of the passenger train service. If mail and passenger earnings do conform to this standard, then the present mail rates, whose fairness it is our object to test, do satisfy the requirements of reasonableness set up by the principle of public utility. How can it be ascertained whether this conformity exists? A comparison on the basis of weight is unsatisfactory, because (1) the weight of the passengers would have to be estimated and because (2) the dead weight hauled, that is, the weight of the cars cannot be assumed to be in proportion to the weight of the mail and passengers. The space basis cannot be accepted for the second of the reasons just stated. While being far from entirely satisfactory, probably a comparison based on the gross tonnage would come the nearest to satisfying all the requirements of a fair test. By gross tonnage I mean the weight of the car plus its contents, whatever they may be. Several of the witnesses who appeared before the commission submitted arguments based on this comparison. Their results may be found in brief compass in the subjoined table :

Year ending	System	Mail Pay per mile per gross ton	Passengers Pay per mile per gross ton
June 30, 1897 - -	Louisville and Nashville <sup>2</sup>	Cents 0.610	Cents 0.685
June 30, 1898 - -	Southern Railway <sup>3</sup>	0.745	0.581
June 30, 1897 - -	All the railways of the United States <sup>4</sup>	0.632	0.700

<sup>1</sup> *Testimony*, etc., 1899, p. 10.

<sup>2</sup> *Senate Report No. 991*, p. 65, LV Congress, second session.

<sup>3</sup> *Testimony*, etc., 1898, p. 942.

<sup>4</sup> *Testimony*, etc., 1899, pp. 88, 89.

If the figures presented in this table are reliable it would have to be conceded that, on the basis we have accepted, the railways are not overpaid for carrying the mail. Mr. Stuart R. Knott, who presented the argument of the Louisville and Nashville Railroad Company, did not state how he obtained the gross tonnage hauled one mile. At another point in his argument he states that "the sixty-foot railway post-office cars, constructed in accordance with government requirements, weigh 89,000 pounds."<sup>1</sup> This may be true, but if he assumes that the average weight of the entire equipment of postal cars of the company he represented was 89,000 pounds, I should feel that he overstates the number of gross tons hauled one mile in the transportation of mail, for the old railway post-office cars do not weigh so much as the new ones. In fairness to the other railways of the United States it must be stated that conditions on the Southern railway are not typical. It is one of the very few systems of the country that receive the so-called special facility pay, and the mail for a very large portion of the South is concentrated on this line, as it has the only fast mail service in the South. Several postmasters-general in succession have refused to recommend this subsidy in their annual estimates, but one Congress after another has continued it by special appropriation. The average earnings per gross ton per mile for all the railways of the United States were taken from the second statement submitted to the postal commission by Mr. Julius Kruttschnitt, general manager of the Southern Pacific Company. His results cannot be accepted as conclusive, for they are in a measure based on estimates. It would have been much more satisfactory to have had from Mr. Kruttschnitt carefully compiled data for the Southern Pacific Company.

In view of the difficulties inherent in obtaining the gross ton mile-age moved respectively in the mail and passenger business, I have been inclined to turn to car-mile and train-mile earnings for light on the reasonableness of the mail compensation. While these bases do not yield results that are wholly satisfactory, nevertheless, as railway records are now kept, they give better results than the method just presented.

In the following table the average earnings from mail and passengers per car per mile are submitted:

<sup>1</sup> *Senate Report No. 901*, p. 73, LV Congress, second session.

Year ending	System	Average earnings per mile of 60-foot mail cars	Average earnings per mile of all passenger cars
June 30, 1897	Chicago and North-Western <sup>1</sup>	Cents 21.66	Cents 21.83
June 30, 1897	Louisville and Nashville <sup>2</sup>	18.79	20.06

The data for the North-Western, I have been assured, were very carefully collected. The total mileage of the mail cars could be ascertained with absolute accuracy, also the mileage of the apartment cars. As the length of the mail cars and the apartments devoted to mail were known, it was a mere matter of arithmetic to find out the equivalent mileage in terms of 60-foot cars. The space allotted to pouches had to be, in fact, estimated, but not in all cases, for on some of the through trains a fixed space is set apart for mail. No great error could be introduced because of the space assigned to pouches, for this space, reduced to car miles, amounted to but 5 per cent. of the total. It does not seem possible because the space allotted to pouches was estimated, an error was introduced into the table of 2 per cent. at the outside. The average car-mile earnings of the passenger cars has been recorded for some years, so there is probably no error at all in the statement of the earnings of the passenger equipment.

Unusual value attaches to this comparison of the mail and passenger earnings of the North-Western, because it is a large system, and has both light and heavy mail routes. That its mail earnings are typical is shown by the fact that while its average earnings per ton per mile for carrying the mail during 1897 were 12.68 cents, the average earnings for the whole country were 12.56 cents.<sup>3</sup> The passenger earnings of this company are also fairly representative. During 1897 the average per mile earnings of passenger trains on the North-Western were 85.9 cents, and the average per mile earnings for the whole

<sup>1</sup> Computed from information given on pages 444 and 449 of *Testimony, etc., 1898*, and on pages 34 and 57 of the *Annual Report of the North-Western Railway for 1897*.

<sup>2</sup> *Senate Report No. 991*, p. 64, LV Congress, second session.

<sup>3</sup> For the average ton-mile earnings of the North-Western, see *Testimony taken by the Joint Congressional Commission on Postal Affairs in the Summer and Autumn of 1898*, p. 449, and for the average earnings of all the railways, see *Testimony, etc., 1899*, p. 45.

country were 93.9 cents.<sup>1</sup> It is to be noted that the average length of the passenger cars is not stated, but I believe it may be assumed that it is less, rather than more, than 60 feet. While the sleepers exceed 60 feet in length, the standard coaches of this company are but 54 feet in length, and the aggregate mileage of the latter is several times that of the former. In the matter of dead weight the mail cars also stand about midway between the coaches and sleepers, and therefore the dead weight of the equipment hauled in transporting mail and passengers can probably also be disregarded without fear of greatly impairing the accuracy of the results.

As Mr. Knott did not state fully how the average car-mile earnings of the Louisville and Nashville were obtained, judgment as to their reliability cannot be passed. But it is due to Mr. Knott to state that no criticism can be made of his methods so far as they are set forth in his argument. The possibility of introducing a small error into the car-mile earnings of mail he has avoided by allowing no space whatever for the carriage of mail in baggage cars in closed pouches. This space would of necessity have to be largely estimated. It is to be noted that he does not give the average length of the mail cars. It may be that the average length of the mail cars on the Louisville and Nashville is not equal to the average length of the baggage cars, coaches, diners and sleepers. On this point, however, I have no information.

Comparisons have now been made of mail and passenger earnings on the basis of the gross tonnage hauled in moving mail and passengers respectively and also on the basis of car-mile earnings. There is still one other comparison which I wish to introduce. Although it is of limited scope, it is nevertheless of great importance. It clearly shows (1) that there is still competition between railways, and (2) that although railways fiercely compete for the mail traffic, it does not follow, as has often been argued, that this business is profitable. As is well known the Burlington and the North-Western run fast-mail trains between Chicago and Council Bluffs. The Burlington carries the overland mail and has two fast-mail trains west bound and one east bound. As the Chicago-Council Bluffs route is the heaviest route this company has it would naturally be expected that these trains would yield a large revenue. The average train-mile earnings of these

<sup>1</sup> *Statistics of the Railways of the United States, 1897*, pp. 82 and 358.



mail trains and the average train-mile earnings of all the passenger trains of this system are set forth in the following table :<sup>1</sup>

Mail trains			Passenger trains
Designation of train.	System	Average earnings per train mile	Average earnings per train mile of all passenger trains
No. 15, west bound No. 7, west bound No. 8, east bound	Chicago, Burlington and Quincy Railroad Company	{ \$1.33 .82 .61 }	\$1.09

After the presentation of this table it scarcely needs to be said that the fast-mail trains of this system between Chicago and Council Bluffs cannot be a source of profit. The average speed of the fastest of these trains is higher than that of any other fast-mail train carrying trans-continental mail. The fast-mail trains between New York and Chicago, and Council Bluffs and San Francisco are slow trains compared with the trains of the Burlington.

#### V.

The fourth and last of Professor Adams's fundamental principles in accordance with which railroad rates should be adjusted reads as follows :

The possibility of introducing economies into the business of transportation depends upon the increase in the volume of traffic, from which, in the absence of countervailing considerations, it follows that a form of traffic which increases most rapidly through a series of years should show a relatively more rapid decrease in changes [charges] as compared with other traffic.\*

It will be remembered that before Professor Adams presented his fundamental principles of rate-making he took the ground that the reasonableness of a rate could not be judged from the cost of service because it is impossible to ascertain the cost service. He also assumed, in substance at least, that even if it were possible to compute the cost of service it would not be advantageous to the public

<sup>1</sup> The data from which the train-mile earnings of the mail trains were computed were obtained from Mr. E. L. West, superintendent of railway mail service. The earnings of passenger trains on the Burlington were obtained from the auditor of the Burlington, Mr. C. I. Sturgis. In train number 7, except on Tuesdays, there is an express car from Chicago to Union Pacific Transfer. Some of the mail cars hauled west loaded are returned empty.

\* *Testimony*, etc., 1899, pp. 11 and 12.

to adjust rates on that basis. In other words, that the interests of the public would be best advanced by encouraging with low rates the movement of those commodities which in the largest measure promote social welfare and by discouraging by high rates the movement of such articles as are either of little value or are positively inimical to the interests of society. As I have before stated, Professor Adams has not presented his views perhaps as explicitly as they have just been set forth, but he is logically bound by his utterances to the propositions I have stated.

Professor Adams's fourth fundamental principle is not in harmony with his other fundamental principles. It was asserted that public utility should be the fundamental consideration in rate-making. This being true, I cannot understand why, as a broad proposition, rates on any particular commodity should be lowered just because the movement of that commodity has largely increased, thereby making possible the introduction of economies into the business of transportation. On the contrary, such an increased movement might be assigned as a sufficient reason for the rate being fixed higher. Whether the rate should go up or down would depend upon whether, after all things had been considered, the enlarged movement of the article under consideration would be the best for society. Concretely stated, there are probably few persons who would contend that railway rates on whisky should be lowered simply because at the prevailing rates the movement of this liquor had largely increased, thereby permitting of the introduction of economies in its transportation. It may be said that mail does not belong in the same class with the article just mentioned. To this I should reply that the assertion is true enough, but that Professor Adams undertook to state the broad principles in harmony with which rates should be adjusted.

GEORGE G. TUNELL.

CHICAGO.

## THE PHILADELPHIA COMMERCIAL MUSEUM.

MERCANTILE pursuits have now attained a prestige and a relative magnitude which they scarcely ever possessed at any other period of the world's history. Evidence accumulates on all sides to show that in the future increasing power and influence are to be the prerogative of the merchant and banker. From the point of view of the history of nations, it may be said that the great community of the world's traders has become all-powerful and most influential in the furtherance of good or evil. The national fate of untold millions hangs from their mercantile adaptability, depend from their "purchasing power" and their accessibility to the barterer and trader. No longer do the nations of the world derive their antagonisms, their feuds, and their hatreds from dynastic quibbles and religious bickerings. The cudgels of the nations are now wielded because of trade privileges, commercial discrimination, and mercantile disaffection. Civilization now spreads not through the search of heathens but through the quest for buyers, and the need for the savage's wares. Diplomacy has learned to use its wiles to further the merchant's interests, and the cannon's roar but proclaims the insistence and the indignation of the traders.

It is the incentive of the merchant which brings about the best results that accrue from progress in natural science, in technology and in transportation. More than ever before the choice of the buyer is being widened, the scope of the seller extended. The local market has all but disappeared, and in its place, one big mart, that of the world has been substituted. In a constantly growing degree, the commercial enterprises of the world contribute by means of fiscal taxation to that support of the state which enables it to discharge its civilizing duties and to execute its pacificatory intentions.

With the growing importance of commerce and the sharpening of commercial competition, there has sprung up everywhere in civilized countries a greater desire for commercial knowledge and information. It is worthy of notice that the great trading nations are urging upon their governments the necessity of closer attention to commercial education, and are insisting upon the devotion of national funds to the furtherance of interest in mercantile intelligence and information. It is a matter for constant attention and frequent complaint that, whereas

it is comparatively easy to acquire knowledge in all branches of technology, industry, agriculture, and forestry, it is most difficult to acquire a satisfactory insight into the characteristics and conditions of the world's commerce and commercial resources. This lack of facilities for obtaining commercial information of a practical, scientific character is in no small degree due to the absence of recognized national institutions devoted to tuition in these special branches. And yet the education of the successful merchant and of his assistants must be of a high order, and must cover an intimate acquaintance with the world's wants, the world's products and their application. The desire to cover this want for information has found expression in the creation of Commercial Museums. These institutions bid fair to become the most valuable means of keeping pace with the freer and more active commercial movement all over the civilized world; in a word, to furnish that preparation which is considered essential in every other field of human exertion and activity.

It would take us beyond the scope of this paper to trace the history of the various commercial museums extant or to discover where and by whom the original conception of such an institution was formed. Whether in Brussels, or in London, or in Vienna is immaterial as far as we are immediately concerned. As far as this country is affected the term "Commercial Museum" is synonymous with the institution in the Quaker City. Philadelphia has once again demonstrated the injustice of casting any reflection upon her rate of progress. The term "Museum" as applied to the institution in Philadelphia is misleading. Its scope and functions extend far beyond those usually associated with museums: it might more aptly be termed a center of intelligence on all matters appertaining to international commerce. It is unnecessary to review the conditions under which this institution started or to advert to the work which it was originally intended to fulfill. Suffice it to say that the original conception—that of forming a purely instructive collection of commercial products—has long since been outgrown, and has been superseded by an idea far more grandiose and wide-reaching: the *raison d'être* of the Philadelphia Commercial Museum as it now stands is primarily the general extension of the foreign interchange and commerce of the United States.

In order that one may fully appreciate the usefulness of an institution of this kind, and especially to this country, it is necessary to place one's self in the position of the American manufacturer who, finding

himself outstripping the absorptive powers of the home market, experiences a growing difficulty in selling his wares and turns his thought to foreign fields in the hope of diminishing the ever-increasing domestic congestion. Straightway this manufacturer perceives that his untutored mind blocks the way: he has heard that wares similar to those he makes are liked abroad. He believes his own products could find favor there and yet he knows not how to market his own manufactures. He is like one in a labyrinth, confident that an exit exists but not knowing how to find it. How is a manufacturer, or for that matter, a merchant to know the conditions which exist, the laws which prevail, the customs which flourish, and the tastes which rule in the hundreds of markets the world over? Certain general conditions are well-known to him, but they only serve to strengthen in him the belief that if he were possessed of specific information he could turn it to profitable use. Where will he obtain that knowledge, where can he be told of the physical qualities which his wares must possess if they are to enter fields already occupied, countries where tastes have been formed? How can the busy manufacturer leave his plant in Connecticut or Pennsylvania to find out the prejudices, the tastes, the predilections of possible customers in the four corners of the globe? And yet, it is just this manufacturer who is by nature and by surroundings often best qualified to furnish the wants of those foreign customers, but who, owing to the very nature of the conditions under which he grew up, is less acquainted with those foreign customers than any of his possible rivals! The American manufacturer can best supply the wants of foreign markets and he is the most ignorant of all about them. For centuries the mills and workshops of Europe have been supplying the ends of the world with their output; their owners and their agents have scoured the earth for information and have created tastes for their products. Whilst the shops and factories of this country were busy keeping pace with the magnificent growth of this new country, Europe was already disposing of its surplus, and when production began to cope with the home demand the ingenuity and time of the American manufacturer were centered in filling a bigger share of his domestic demand, in pleasing a bigger community of his fellow-countrymen. In time his prolific mills and shops proved too quick for even the active demand of the consumers of this country. There came a period of idleness, followed by further periods of inactivity; the glut of commodities had been produced, the fires were put out and

the mills shut down. But it needed but a little observation to discover that periods of domestic depression were often synchronous with a strong demand for the very same goods abroad—foreign traders had snatched at the goods on his overburdened bargain-counter. The desire grew strong to sell to the foreign consumer. And with this desire there came the discovery that he was ignorant of the foreign consumer's whereabouts, tastes, and wishes. It is to furnish him with this knowledge that the Philadelphia Commercial Museum exists, and it is through this institution that he is rapidly obtaining that knowledge and experience which has been acquired by his European rival through long years of slow, plodding, expensive experiment. How did this institution come to do this work?

In the first place there was no "institution;" there was but Dr. William P. Wilson and an amanuensis. He secured the active co-operation of the late Dr. William Pepper, himself a man of remarkable endowments, to carry out those ideas of commercial enlightenment which were shared in common and the dissemination of which were to prove of such vast utility to the commercial interests of this country. The first efforts of Dr. Pepper and Dr. Wilson were directed towards obtaining local support for and stimulating local interest in the task which they had set themselves to perform. In this they were eminently successful. Their next venture was to prevent the dispersion of the collection of natural products of commercial interest which had been brought from the ends of the world to the Chicago World's Fair. They not only succeeded in this, but they also found a place for them in an immense building composed of disused offices which the Pennsylvania Railway Company generously gave for a number of years at a nominal rent. The fibers, wools, hides, gums, oils, timbers, minerals, seeds, and the rest of the products were classified scientifically, presented in monographic and geographic groups, inscribed with the basic information which could cover them in a general way, and the result was the most interesting and instructive collection of commercially useful products ever made accessible to the public. A museum of commercial products had been created. It formed the nucleus of a most remarkable growth. The exhibits awakened interest, questions began to be asked about them, and answers were given freely. The public of Philadelphia, proud of the possession of such a valuable collection, voted money for its maintenance and extension. The desire for information regarding these commercial products grew

to such extent that even the wide knowledge of its assemble could not always give the latest information which might be available concerning them. It was necessary to obtain information from abroad regarding them, and an active foreign correspondence got under way. This was supplemented by the organization of a library of commercial publications, from which many data were procured. The Philadelphia Commercial Museum began to be known in a general way as an authority on foreign products of commercial interest. Then came the stray inquiry, not regarding the natural product, but the foreign manufactured article and its disposal. The Bureau of Information had received its first inquiry and had been set in motion. Little by little, with much groping, the work of the bureau was extended. It grew so quickly that it soon surpassed in magnitude the original "Museum." It was soon found that the original conception had undergone the quantitative modifications which finally had produced a qualitative change. And the "Museum" began to work in the commercial world changes similar to those which the introduction of steam had produced in the industrial world. The merchant, and especially the manufacturer, began to hear of the institution which was specially equipped to furnish that knowledge which they in vain had sought—they had now the help of a skilled instructor. The schoolmaster had literally gone abroad for books containing any information of direct use to the exporter—for periodicals, pamphlets, consular reports, government statistics, chamber of commerce reports, and all the literary output which could be of avail in building up a knowledge of commercial matters in all countries. The commercial library of the Commercial Museum had been started. A staff of librarians and cataloguers was gradually shaping into tangible units that which had been a scattered mass of details, lost in all corners of the globe, hidden behind the intricacies of the dozen languages of international trade. Every fact worth knowing, whether now or later, was seized upon. The card-index system, with its manifold cross-references, did the rest. "Cabots" could be found under "Textiles," as well as under Turkey, subsection "Smyrna," the town importing the article. In the same way every article or paragraph appearing in any of the hundreds of publications regularly received from all parts of the globe which could possibly serve as a basis of information useful to any class of commercial men or manufacturers was recorded in the way most accessible for future reference, was made available for use on simple request and were evidence of *bona fides*.

Soon it was found that this service of commercial information was being appreciated by the various manufacturing interests of the country. It was a ready adviser on all matters appertaining to foreign trade. Where else in the United States could you learn at the shortest notice what shape of butcher's knife was preferred in Servia, or how tenpenny nails had to be wrapped up in order to suit the requirements of Beyrouth; whose brand of condensed milk was in favor in Colombo, or whose make of argicultural forks were being used in Argentina? Endless were the details which needed explanation before a manufacturer felt justified in making the expenditure incidental to initial efforts at export. Was it really true that the packing methods ordinarily used here would be useless if adopted for stoves going to Bogota? Was it a fact that cases for Buenos Ayres had to be marked on the side only, and if for Valparaiso marked with stencil only? Were musical instruments shipped to Mexico taxed at customs on the net or the gross or the legal weight? Was there any demand for oilcloth in Brazil? What would be the freight on forty brass bedsteads ordered from Rangoon? How would you write "Handle with care" in Russian? Could you do into English the annexed letter from Yokohama? What is the analysis of the coal furnished by the local mines at Cape Town? What is the freight rate on coal to that port? Was the demand in Brisbane chiefly for lubricating oils or lubricating greases?

There is no end to the catechism which was being formed by the manufacturers and shippers of this country. And to each the Commercial Museum gave its reply, and begged to "come again." In spite of the fact that the work was handicapped by lack of sufficient funds—for the city's appropriations were for the "coming fiscal year," in which time the Museum doubled its work—excellent results were being obtained. A staff of linguists and commercial experts was being brought together; agents were sent abroad to form co-operations and obtain information; foreign governments were being enrolled among the sympathizers, and chambers of commerce made active advisers in the work. Before long the Commercial Museum had grown so great, its resources and its equipment had increased so remarkably, that Dr. Wilson, the director, thought it possible to launch out more boldly. The Commercial Museum was destined to become not merely the passive, watchful servant, it was to be the alert, indefatigable adviser of the multifarious manufacturing interests of this country. It took the initiative, investigated trade conditions in all parts of the world,



noted opportunities and quickly called attention to the possibilities presented. It extended its service: for a nominal yearly payment (the cost of obtaining, ordering, and disseminating information) it began to offer to manufacturers all over the country specific detailed knowledge which was essential to the successful prosecution of an export business. The offer found a ready acceptance at the hands of the most enterprising and energetic manufacturers all over the country. This information was in the shape of an exhaustive report on the possibilities of and the method to be adopted for selling a specific article in a particular foreign market; for instance, sheep-shears in Wellington, New Zealand, or machine belting in Bombay. This report aimed to convey all necessary data under the following captions: Character and variety of the article already on the market the competition of which would have to be faced; names and addresses of the manufacturers now supplying the market, with special reference to those characteristics of their goods which had procured them favor; all available statistical information regarding the quantity imported, with reference to their countries of origin, declared values, etc.; prices of the article in question at the manufacturer's, and the terms of payment generally demanded of and granted by him; price at which the article is being sold by the importer to the consumers on the market in question; information regarding facilities of transportation and the relative shipping rates and charges between the American seaport and the market, as compared with the rates paid by rival countries; customs charges and regulations as to invoices, marking, declaration, etc.; recommendations as to wrapping, labeling, marking, and packing, as governed by climatic conditions, transportation facilities, and handling, etc.; names and addresses of the most reliable importers already trading in the article in question; the field of distribution controlled by the market under review; any useful supplementary information not included in any of the foregoing. It will be conceded that any manufacturer or shipper who was armed with the information given in such a regular monthly report was acquiring a fund of information which would be of great benefit in enabling him to embark upon a venture entirely new to him.

When the information given out by the Commercial Museum began to be acted upon, its sphere of utility was immediately greatly extended. For the American houses, in communicating with foreign merchants not infrequently mentioned that their efforts had been

directed by the Philadelphia Commercial Museum. The fame of this institution abroad was considerably magnified, especially when it became more generally known that the Museum was willing to give, free of charge, any desired information concerning the resources or industries of the United States. Here again this country's trade was benefited. Endless in number and variety were the enquiries which began to pour in on the Museum. Now it was a copy of a trade-mark which reached the Museum, with the request that the name of its owner should be given, thus inaugurating direct trade relationship instead of Hamburg or Liverpool mediation. Most frequently the names of manufacturers of certain specified articles were desired, generally coupled with the request that they should be asked to communicate with the enquirer. Not infrequently orders, or specifications of requirements were received, with the request that they be placed in the hands of suitable parties.

Soon after the Museum had become assured of the willingness and the strong desire to reciprocate kindnesses which animated its many correspondents abroad, the idea was conceived of organizing a systematic plan for the investigation of the moral and commercial reputation of the merchants all over the world who were actual or prospective correspondents of American houses. It was obvious that American manufacturers should be furnished reliable statements regarding not only the goods which could be disposed of in various parts of the world, but also concerning the houses to whom these articles might be offered without risk. This work was inaugurated and is still being vigorously pushed on. Results prove that the hopes which were entertained at the inception of the work were not delusive. Rapidly, yet surely and accurately, a mass of information has been obtained. It aims to cover as completely as possible the following particulars concerning a firm: exact style and address, specific list of articles imported and exported, telegraphic address and names of the cable codes used. This much had been generally obtained without difficulty from friendly correspondents in all regions. The information was corrected and supplemented, on direct request, by the persons interested. It is quite exceptional to meet with any refusal to supply this information, especially as after a lapse of time an unanswered first request is followed by a second and, if need be, a third. After knowing exactly the *nature* of a business conducted by a house, it became desirable to know more concerning the methods and principles by which the conduct

of the business was governed, as well as the pecuniary conditions of the house. Here it was that the Museum found cause to congratulate itself on its extensive connections and its warm friendship with the great banking institutions all over the world. It needed but the assurance that the information would be treated with all discretion and in perfect confidence. The banks were sensible and quick enough to perceive the advantage to themselves which would result from the introduction of American exporters only to such houses as were morally and financially sound. They gave what information they had to the Museum — moral reputation, business peculiarities, financial status. As this confidential matter pours into the Museum it is being recorded, checked, controlled, kept fresh by constant revision and corroborative testimony. As occasion arises, the moral or financial blacksheep, the defaulters, the bankrupts, the "lame ducks," are quickly made known to all who might come in contact with them in the United States. The result is a reduction to a minimum of connections which might otherwise prove unsatisfactory. There is not a "shaky" house in Amsterdam or Smyrna or Bangkok from whom, at some time or other, the Museum has not saved some intended victim of a plausible letter written under a meretricious letter head.

Acting upon its primary principle of never waiting till its wares are stale before serving them up, the Museum has always put this information to use while it was fresh and "piping hot." The following true copy of a statement sent out conveys a good idea of the form and substance of the information given :

**A. S. PATRIKIOS & Co.,**  
Constantinople,  
Turkey-in-Europe.

Established in 1847.

Telegraphic address "Patrikios." Codes: A1, ABC 4th edition.

Branches at Ismid and Galata.

Bankers, commission merchants and real estate brokers.

Importers: agricultural machinery, steam engines, cereals, flour, etc.  
Exporters: cereals, raw silk, silk cocoons, etc. Proprietors of steam mills.

Representatives at Ismid for the "Banque Imperial Ottomane," Constantinople, Turkey-in-Europe.

Property of the Philadelphia  
Commercial Museum.

E 2558

It will be seen that Messrs. A. S. Patrikios & Co. import agricultural machinery, steam engines, cereals, flour, etc. Every United States manufacturer who has informed the Museum that he is desirous of establishing foreign connections, who manufactures agricultural machinery, steam engines, etc., will receive at frequent intervals such cards as the above, giving particulars of the business conducted by a possible customer. The circulation of the information is a guarantee of the reliability of the firm therein described. It will be readily understood that with such information in hand, there is no reasonable excuse why overtures should not be made to the foreign house, and why these should not lead to the acquisition of a share of that firm's business. As a matter of fact, this special service of the Museum has borne excellent fruit. After all, half the trouble of selling is over when once you know for certain on whom you may concentrate your efforts, whom you must avoid, in whom you may place confidence and from whom you must exact "cash against Bills of Lading."

It will be seen, then, that the Museum's work has been manifold in character yet with a single end. The American manufacturer has been told in a precise, specific way where he may sell his wares, to whom he may sell them, how he can best realize his intentions. It is evident that the amount of work involved is something enormous. Letters in a dozen languages have to be deciphered, and typewritten answers written, a thousand periodicals have to be searched and the information obtained indexed and cross-indexed; thousands of foreign houses must be investigated and reported upon. All this takes time, money, hard work, and executive ability.

And no sooner does the performance of one branch of work seem to have approached that smoothness and clearness of execution which stamps it as humanly perfect, than a new field for ingenuity, a new factor in furthering international trade interests is discovered and brought into play. It goes through the evolutionary process which has characterized all phases of development in the Museum's work. The idea is applied, the first tentative efforts are made, faults are discovered, remedies introduced, the drawbacks eliminated, improvements made until the crude idea finally finds expression in another perfect wheel in the great mechanism of foreign trade intelligence. Two of these latest additions to the Museum's efforts may be instanced: the "rush-news" service and the "photographic information." The former consists in making immediately available for use any paragraph of news

which may come in with the mail from a certain part of the world. For instance, the Australian mail has just brought the papers from the Antipodes. The newspapers are searched, and all items which call for prompt attention are immediately dealt with by a corps of experts devoted to that special work, supplemented in their efforts by others of the foreign staff. It may be a specification of government supplies for which tenders must be delivered by a certain date; it may be the decision of a deliberative body to sanction the building of a certain railway, the construction of an aqueduct, the dredging of a harbor; or it may be the announcement of the heavy defalcations of the treasurer of an important bank. As quickly as can be, the news is spread and the exporters are made aware of that which interests them. If an appropriation has been made for railway extension or for the improvement of equipment, the news goes to the maker of locomotives, of rails, of steam fittings; in short, to everyone who is directly interested. Sometimes the news has just been received direct from the agent on the spot: more frequently the Museum is ahead of him, but generally it compensates for his unpardonable omissions to report.

The need of the photographic service became obvious on the day when it was found that there were limits to the Museum's descriptive powers. However well a machine or the special function demanded of it might be portrayed in words, there was often something lacking about the description which needed to be supplied. The camera came to the rescue; so that now there is no doubt left as to the exact character of a plow used in a particular country. The Museum's agent sends a picture of the article most in demand—the fancy articles and the staple goods. The reproduction of the picture, the emphasizing of detail, in fact, all the rest is done in the studios of the Museum under the care of an expert photographer. And even were no picture of an imported article can be obtained, the work it has to perform can be pictured so that the manufacturer knows exactly what is expected of him. A glance at the paddy fields of the Mekong Valley before the floods and during the floods, for instance, is sufficient to show that only a special form of plow can be used on these rice fields.

The most exact of sciences, chemistry, has been brought to the assistance of the Museum. Its magnificently equipped and intelligently conducted laboratories have already rendered invaluable service to the American manufacturer desirous of knowing the secrets of his foreign rival's wares: the percentage of cotton in the "pure linen"

goods, of maize in the "wheaten flour," of shrinkage in manufacturing. Still more useful have been the verdicts pronounced by it concerning the properties and values of natural products sent from all parts of the globe. How much money has not been saved by the statements that certain "immense silver deposits" contained nothing more valuable than iron pyrites; that certain gums were useless for the manufacture of varnish; that certain caoutchouc contained so much water? If the work done by the laboratories of the Commercial Museum had not been immediately productive of such big results as have followed on the efforts of its less "scientific" departments, it is a source of consolation to know that what it has done has been admirably done, and that, at any moment it may accomplish that for which the world could never cease to be indebted and grateful.

W. COLGROVE BETTS.

PHILADELPHIA.

## NOTES.

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### PROFESSOR DUNBAR.

CHARLES FRANKLIN DUNBAR, professor of political economy in Harvard University, died in his seventieth year, on January 29, 1900. It is with a sinking heart that we chronicle the passing of another of the first economists of our country. Born at Abington, Massachusetts, July 28, 1831, he spent his life in that state, varied by a short stay in Louisiana during the Civil War. In 1851 he was graduated at Harvard, where he was conspicuous for his accurate literary style; he studied law for a time in the Harvard Law School; then lived in the country at Lexington, Mass., for some years, writing more or less for Boston newspapers. In 1859 he became assistant editor, and in 1864 editor in chief, of the Boston *Daily Advertiser*, making it in a short time a power of the first importance. Probably no editorials written during that period of our history showed anything like the insight and grasp of the facts and principles relating to our financial policy which were displayed in those of Mr. Dunbar. The *Advertiser* became easily the first newspaper in New England, and its editor became known as a writer of unusual attainments and a man of exceptional force and ability.

Harvard University at that time had no professorship of political economy, the subject being taught by the professor of philosophy, Francis Bowen. One of the first results of the policy of Charles W. Eliot, chosen president of Harvard in 1869, was the appointment of Mr. Dunbar to a chair of political economy in 1871, which he held to the time of his death. His incumbency, therefore, covers the interesting period of the development of economic instruction in the United States from small beginnings to a symmetrically arranged curriculum. Professor Dunbar's discretion and sound judgment led to his being chosen as Dean of the Faculty (in succession to Professor E. W. Gurney) from 1876 to 1882. In addition to his teaching, and in spite of a weak constitution and frail health, he successfully performed his administrative tasks, though at a great loss to economics during what should have been most productive years. In 1891 Harvard University gave him the degree of LL.D., a distinction rarely offered to those still in the active service of the institution.

By temperament Professor Dunbar was not disposed to rapid production. His accuracy as to facts, his exactness of expression, his contained brevity, his caution made writing a slow process; but what he did publish was characterized by a singular efficiency, force, logic, and literary finish. His treatment was exhaustive and convincing; the depth of his scholarship and a constitutional aversion to inaccuracy made impossible even minor blemishes in his work. The following books form his best known contributions to economics:

*Laws of the United States relating to Currency, Finance, and Banking from 1789 to 1891.* Boston: Ginn & Co., 1891. 8vo. pp. 309.

*Chapters on the Theory and History of Banking.* New York: Putnam's Sons, 1891. 12mo. pp. vi + 199. [First privately printed, Cambridge, 1885, without the chapters on "Combined Reserves," and "Bank of Amsterdam."]

His most characteristic work, however, is to be found in the following articles:

"Economic Science in America, 1776-1876," *North American Review*, January 1876.

"The Reaction in Political Economy," *Quarterly Journal of Economy*, October 1896.

"Deposits as Currency," *ibid.*, July 1887.

"The Direct Tax," *ibid.*, July 1889.

"The Academic Study of Political Economy," *ibid.*, July 1891.

"The Bank of Venice," *ibid.*, April 1892.

"The Bank Note Question," *ibid.*, October 1892.

"The New Income Tax," *ibid.*, October 1894.

"Safety of the Legal Tender Paper," *ibid.*, April 1897.

"The National Bank System," *ibid.*, October 1897.

"Can We Keep a Gold Currency?" *ibid.*, April 1899.

His history of economics in this country from 1776 to 1876 is so judicial, so just, so comprehensive that it must always stand as the best introduction to any historical treatment of our science in America. It is a model of its kind.

Professor Dunbar was so little known to the general public, by reason of his modesty and lack of advertising skill, that his services to the cause of sound monetary education may easily be underrated. Public addresses he never gave; but through his teaching and writing on money and taxation he undoubtedly changed the currents of thinking among leaders of opinion. Receiving from the erratic McLeod a



most valuable suggestion of the identity existing between bank issues and deposits in their service to a bank, he gave it such cogent and lucid exposition that it may now be regarded as a part of our general stock of beliefs, thereby having no small influence on the thinking of the day. His article on "Deposits as Currency" cannot possibly be overestimated as a clear and practical exposition of monetary operations generally overlooked by the business world, especially as they concern the elasticity of our currency. It is to be hoped that his death will not prevent the carrying out of his plan to issue a new volume dealing with existing currency problems. In a letter to the writer during the sessions of the Monetary Commission (December 5, 1897) he said: "With reference to the suggestion in your letter about another article, the two which I have written (Greenbacks and National Banking) were part of a scheme, and to be followed by a third, much on the line which you mention." This third article was the one on a Gold Currency published in 1899—the last of his work. These studies (including "Deposits as Currency") should be reprinted in book form so that they may be accessible to the general public. They are the best writing of any American economist on the problems still before us for settlement. When one realizes how much influence Professor Dunbar might have had upon public opinion by such work as this, one almost begrudges to Harvard University the time and strength he gave to her administrative work, and even to the preparation of his really valuable volume of *Laws*, which might have been done by a mind far less fit than his for original and wise handling of great public questions.

It should not be forgotten, also, how much valuable historical material on the finances of the Civil War is buried in the files of the *Boston Advertiser* in Professor Dunbar's editorials. A great service could be rendered by the publication under competent editorship of these valuable papers.

Doubtless, as he himself would have said, his greatest service to political economy was not performed by his writing, but by his work in the class room and his organization of economic teaching at Harvard; for his was a pioneer's task, at a period soon after the Civil War, when the minds of the community were turned to the solution of new economic problems, for which university instruction had hitherto given little help.

The controlling principle which guided him in the development of the courses, as well as in the conduct of the *Quarterly Journal of Economics* founded in 1886, cannot be better stated than in his words characterizing political economy: "Broad as are its applications in the actual affairs of life, it is mastered and fruitfully studied best as an abstract inquiry. . . . Hence, . . . the impossibility of stating the application of any scientific law under special conditions, until the nature of the law has first been thoroughly investigated, abstraction being made of all accidents of time, place, or disturbing influences (*North American Review*, 1876, p. 146). Before the history, should come a grasp of the principles whose history was desired; before the practical applications, should come a process by which the economic laws were thoroughly assimilated. Remembering that the first extension of economic courses took place in these years at Harvard, and that students went from there to other institutions, it is not too much to say that there is no department of political economy in the country today which has been unaffected by this policy, in spite of the effort to approach the subject first by courses dealing with the descriptive material and the history of doctrine. Hence Professor Dunbar, through his insight, judgment and analytic quality, has had more influence upon the teaching of political economy in America than can be assigned to any other man. Perhaps this conclusion would have been to him the most satisfying encomium which could be pronounced upon him. The somewhat Ricardian quotation above given should not be misinterpreted: it is not a declaration for theoretical treatment *per se*; for no one was more fitted by nature and by experience than he for the testing of theory by facts. His conception of the best methods of adjusting the courses of instruction so as to produce the best economist was not infrequently misunderstood by the callow, or superficial student; it often required a year or so of faith before the worker learned enough to see the value of the disciplinary methods. Professor Dunbar was concerned more with giving men mental grasp and power to think in the subject than with giving them useful information—great as is that temptation in so practical a subject as economics. Also, as editor of the journal he was most interested in stimulating the discussion of principles and theory which would lead to additions to the science, knowing full well that the eager pressure for practical results would bring forth enough useful and timely material.

In view of this attitude toward his subject, it is well to remember that his actual achievements were all in the field of practical economics, thus keeping that poise between logical reasoning and concrete experience which was so marked in Adam Smith and Bagehot. But his mind kept a firm and steady grasp upon the theoretical discussions, no matter how far they wandered into ethical or political complications. This quality appears at its best in "The Reaction in Political Economy," written as a declaration of the editor in the first number of the *Quarterly Journal of Economics*. By showing that the reaction was largely due to the stoppage of scientific inquiry by the failure to extend discussion to the fresh experience of recent times, he made it evident that the differences of opinion as to method were mainly differences in degree, and aided in bringing about in America the present freedom from dispute on this matter. Likewise, by pointing out that the most rigid Ricardian may reject or accept *laissez faire*, without doing violence to his standing as a member of the so-called old school, he explained that it had nothing to do with economic reasoning itself, that it concerned only the applications of such reasoning. His position, then, among modern economists was clearly that of a consistent, broad, philosophical student closely interested in practical problems; too learned to be an extremist; too exact to be visionary; too penetrating to be carried away by any passing fads.

Possessing a frail body, a weak voice, an impersonal manner, and no great magnetism as a teacher, yet no one of Professor Dunbar's friends will ever forget his strong, refined face, his penetrating eye, his self-possession, his deliberation of perfectly-adjusted speech, his keenness, his flashes of humor, his knowledge of human nature, his practical common sense, and his political sagacity. His students everywhere throughout the land will unite in doing honor to his memory.

J. LAURENCE LAUGHLIN.

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#### DR. MACFARLANE ON "COMPLEMENTARY GOODS."<sup>1</sup>

IN Part I of his recently published book Dr. MacFarlane has developed numerous original, and sometimes erroneous concepts. He argues, for instance, that if the Austrians had considered the case of the good made to order, they would have been led to modify their theory at the point where it eliminates the sellers' valuations;<sup>2</sup> though it need

<sup>1</sup> *Value and Distribution*. Philadelphia: Lippincott & Co., 1899.

<sup>2</sup> P. 46.

scarcely be pointed out that the price of the good made to order is conspicuously a price with which the seller's valuation has nothing whatever to do. And again, he contends that the Austrians, in arguing that buyers' valuations will range themselves in a nicely graduated differential series, have based their theory on an "unwarranted assumption of free competition."<sup>1</sup> Clearly Dr. MacFarlane must have a novel understanding of the term free competition. In their ordinary use the words connote, I think, the non-existence of advantage on the part of any of the competitors; as applied to buyers they necessarily mean that the buyers are equally capable, or that each places on the good in question precisely the same money valuation. And in this, the ordinary sense of the term, free competition is manifestly incompatible with valuations ranged in differential series; for, however slight the differences by which the series is graduated, buyer Z will nevertheless be at a decided disadvantage in competing with buyer A.

But passing over minor fallacies such as these, I wish briefly to indicate the more fundamental of the several errors contained in Dr. MacFarlane's section on Complementary Goods.\*

In parting with a complementary good we lose not only the pleasure that would result from the direct consumption of that single commodity, but also an additional pleasure due to the importance of this single good to the complementary group of which it forms an essential part. In other words, a single commodity when it becomes a part of such a group, has, as it were, two marginal utilities or values. This raises the question, "Which of these, or what combination of these, determines the price of the productive good?" . . . Here, as in every instance of scarcity price, the marginal utility of the good to the buyer and its marginal utility to the seller fix the upper and lower limits of the price. The precise point at which the price will be fixed depends upon the relative monopoly strength of the parties to the transaction.

Now it must be objected in the first place that a commodity can have a real utility only to the person who actually possesses and uses it, and that it is therefore meaningless to speak of a commodity as having two marginal utilities. The question becomes intelligible only when we understand that "marginal utility" is Dr. MacFarlane's way of saying "subjective valuation." Moreover, in parting with a complementary good we do *not* lose the "pleasure that would result from the direct consumption of the commodity," for the simple reason that

\* P. 48.

\* P. 60.

complementary goods—land, labor, machines, etc.—are, generally speaking, not directly consumable. If, then, complementary goods yield only indirect utilities, it follows that such goods cannot possess a marginal utility to the seller, in Dr. MacFarlane's sense of the term. In a word, his lower limit to the price of a productive good is purely imaginary.

Facts, patent to be sure, yet very much to the point for the handling of the problem in question, are these: that although the ordinary productive good cannot be directly consumed, it can nevertheless be turned to a variety of uses; in whichever of its several possible uses the good is consumed it will yield a value; and accordingly, therefore, as they can turn it to one use or to another, different entrepreneurs will value the good at quite different figures. If Dr. MacFarlane had taken these facts into consideration, his theory of price must, I think, have issued essentially as follows: In such a market as the economist usually takes for granted, the productive good will go to that entrepreneur who can make it yield the greatest utility, and who, accordingly, puts on the good the highest valuation. His money valuation, or the utmost he is willing to give for the good rather than go without it, is the upper limit of the price. The next highest valuation put upon the good will be the lower limit of the price. And as between these limits—provided the difference is appreciable—the precise point at which the good sells will, in fact, be determined by the "relative monopoly strength of the parties to the transaction."

It is to be added, however, that this obvious bit of reasoning by no means sounds the depths of the difficulties presented by complementary goods; but that, quite to the contrary, it leads directly to a problem the acquaintance of which Dr. MacFarlane apparently has yet to make. If the price of a productive good is determined between two valuations, the question arises, on what grounds are these valuations made? The answer, of course, is that the entrepreneur must always base his valuations on his own or somebody else's experience. Some such complementary group as he has it in mind to form, has been made to turn out consumable commodities before; and the value which the finished commodities brought in the market has been divided up and a portion of it ascribed to each factor of the group. But this only raises the further question: How are these shares assigned, or according to what principles can we impute to a

complementary good its peculiar contribution to the value of the joint product ?

Now it is from the heart of Wieser's discussion of this second problem of "complementariness" that Dr. MacFarlane draws the following quotation : "The imputation of the productive contribution assigns in this way to every productive good a *medium share*. To calculate the productive contribution, and therefore also the value, at this medium amount is sound common sense."<sup>1</sup> And this quotation, Dr. MacFarlane would have us believe, is a direct answer to that question of his which asks which of the "two marginal utilities" of a complementary good determines its price. "When the Austrians came to the question of complementary goods," he says, "they thought they had found an exceptional complication, for it was clear that in this case the marginal utility to buyer and seller only set limits within which the price may vary. And so, without further analysis, we are told that the price is fixed at a middle point between these limits, or that it is a 'medium amount.'"<sup>2</sup>

Now I am inclined to think that, even in the light of the above scanty introduction to the problem of imputation, the utter inapplicability of Wieser's words to Dr. MacFarlane's question will appear at once. In the first place, to characterize the "productive contribution and therefore also the value" of a complementary good as a "medium amount" is to say nothing of price. For the value referred to is not exchange value but the "natural" "use" or "theoretical" value which is virtually identical with the "productive contribution" or "economical share." And, secondly, it needs only a glance at the context from which the passage is taken to show that Wieser's "medium share" is not medium between Dr. MacFarlane's "two marginal utilities." Wieser has just stated that to a complementary good must be imputed a *greater* value than it could obtain through its own powers working alone ; but a *lesser* value than would be lost if the good were destroyed. And it is between these greater and lesser values—values which have been ascribed to complementary goods by fallacious principles of imputation—that the share imputed by Wieser's rule is said to be a "medium amount."

ALFRED L. FISH.

<sup>1</sup> *Natural Value*, p. 92.

<sup>2</sup> *Value and Distribution*, p. 60.

## THE TRUST PROBLEM : A PROPOSED SOLUTION.

WHETHER this country harbors real trusts in any considerable number, is a question upon which there is a difference of opinion. All agree however, that the various anti-trust laws, heretofore enacted in forty-five states, have been ineffectual in suppressing either the real, or the so-called trusts, which have called forth these laws.

The purpose of this paper is to propose a Federal Income Tax as a practicable means of solving the trust problem.

The tax to be employed, however, is not to be such a one as Congress in the sixties, levied upon incomes in general, and again, in recent years sought to impose, but one that is to be graduated under a new principle of graduation, hereinafter set out.

Before discussing the proposed tax the writer submits a few conclusions which he has reached upon the trust question. They are these :

The trust problem is but a phase of the larger social problem.

The anti-trust movement, though ostensibly directed against trusts, is in fact directed against certain evils, of which trusts are supposed to be, but are only in part, the creative agents, and the embodiment. Its real aim is to correct evils which were as pronounced before the era of trusts as now, and which would continue though trusts were crushed. Its object is to secure a more equitable division of the reward of labor, and to destroy the power, wherever lodged and however employed, of exacting from consumers, by means of higher prices, exorbitant reward for labor, and of diverting this reward to purposes other than the rewarding of labor.

So-called trusts are, largely, the result of the unrestricted, destructive competition, which brings financial disaster, at sometime, upon nine tenths of all who embark in business. This competition has made the history of our industries but a story of tragedies, whose every page tells of life and death struggles between competitors, in which the strong victors of one day were crushed the next, by others still stronger. This competition compelled those to combine who would escape its merciless wheels.

These so-called trusts are mostly but corporations which have secured a practical monopoly of the production of certain commodities. They have no powers in law, which other corporations do not enjoy in an equal measure. They possess virtues as well as vices.

They are not evils *per se*, but evils only under certain conditions. They effect large savings in cost of production, which should be welcomed, if consumers and wage-earners are allowed to share in their benefits. To crush trusts indiscriminately would be like prohibiting the use of dynamite for any purpose because it is used for criminal ends in the destructive bomb as well as for legitimate purposes in mines. It would be like excluding thousands from a beautiful park because a few vandals destroy plants therein. The abuse, and not the enjoyment of a privilege should be punished.

Every previous step in the industrial evolution, by effecting savings in cost of production and lowering prices of commodities has benefited consumers. Every such step also has benefited wage-earners as a class. Labor temporarily displaced found re-employment at better wages when an increased demand for commodities followed the lowering of prices. The formation of trusts and larger corporations is but a further step in this evolution, which, under proper guidance, will result in similar benefits.

The solution of the trust problem must therefore not be sought in the suppression of the concerns which effect savings in production, nor in permitting them to appropriate the whole of such savings in the form of larger profits. It lies in the employment of measures by which a liberal share of such savings can be made to inure to the benefit of consumers through lower prices, or to wage-earners, through higher wages, or to the government through taxes. We must aim at acceptance of such benefits as trusts afford, must abstain from interference with trusts where they freely part with the benefits arising from their savings in production, and must interfere with them only when they retain an exorbitant share of such benefits.

By their income it may be judged what disposition trusts made of these benefits. The ratio of the net income of each trust to paid-up capital, to aggregate wages paid, and to volume of business is proof with what degree of fairness it parted with such benefits, or with what degree of unfairness it retained them. These incomes must be scrutinized, and with these incomes those must primarily concern themselves who would find a practicable solution of the trust problem.

The trust which is allowed to exploit its powers and privileges to the fullest extent with impunity, and which is left in the undisturbed enjoyment of its income, however ill gotten and however much the result of extortion, will see no need of mending its evil ways. To



deny to it the right to the undisturbed enjoyment of its ill-gotten gain would be to discourage extortion on its part.

A federal tax on the incomes of trusts and corporations, so graduated as to be less or more burdensome on each trust, as each one was more or less liberal in its dealings with wage-earners and consumers, will insure to these two classes, through direct as well as indirect means, an equitable share of the benefits of the saving in cost of production, and with that done the trust problem is practically solved.

Tariff reduction on commodities controlled by trusts would be a welcome ally, and publicity in the organization and management of trusts and more extended jurisdiction of the federal government over large corporations are necessary allies in solving the trust problem.

It is to the solution of the trust problem as thus understood that the proposed tax is directed, and in its further discussion the soundness of the foregoing conclusions is assumed.

This tax is not intended to be an ordinary income tax, but one that is to be levied independent of, and in addition to any general income tax that may be contemplated. New Zealand supplements her ordinary land tax by an additional graduated land tax. She imposes the latter upon certain large estates only, and even makes it more burdensome in cases of non-resident ownership. Thus, too, the ordinary tax, which may eventually be levied on gross incomes, by whomsoever and from whatsoever source received, is to be supplemented by an additional tax on the net incomes of trusts and corporations, which tax is to be graduated according to the ratio of the income to be taxed to the aggregate wages paid for labor participating in its production.

A country which employs import duties to provide revenue and to afford protection to industries, and whose separate states wisely employ high license to provide revenue and to encourage temperance, will pursue no revolutionary lines if it employs income taxes to provide revenue and to secure a more equitable division of the reward of labor.

For want of better terms let us call the first of these income taxes a revenue income tax, and the second a remedial income tax. The first to have for its primary purpose the raising of revenue; the second, the double purpose of raising revenue and modifying certain evils resulting from defects in our system of production and distribution. It is with the remedial income tax only that we are now dealing.

For the purposes of this tax, let us call the profits of trusts and corporations, after deductions for wages, compensation for services of proprietors, expenses, and interest on borrowed capital, their gross income. From their gross income let us deduct an amount equal to a fair rate of interest on their paid up capital, and also a sum equal to a fair rate per cent. of the wages paid by them for labor participating in its production, and let us call the balance their net income, which alone is to be subject to this tax.

Six per cent. is perhaps a fair rate to be allowed as interest on capital, and five per cent. of wages paid, a fair rate to be allowed as margin on labor employed. On net incomes, as thus ascertained, if not in excess of a sum equal to 1 per cent. of total wages paid for labor participating in their production, let there be placed a tax of 1 per cent. On net incomes in excess of 1, and not in excess of 2 per cent. of such wages, let the tax be 2 per cent. And on net incomes in excess of 2, and not in excess of 3 per cent., make the tax 3 per cent., and let the further increase in rate be in this ratio.

Suppose a corporation with a capital of \$100,000, an annual wage account of \$50,000, and annual gross profits aggregating \$13,500. Deducting from the latter the sum of \$6000 as interest on capital and \$2500 as margin on wages, there would remain net income to the amount of \$5000 to be taxed. On the first \$500 of this the tax would be \$5, on the second \$500 the tax would be \$10, on the third \$500 the tax would be \$15, and on the whole sum the tax would be \$275. Suppose now another corporation with an equal amount of capital and gross income, but with an annual wage account of only \$30,000. Its exemptions would be \$7500, and its net income to be taxed, \$6000. Its tax on the first \$300 of this amount at the foregoing rate would be \$3, on the second \$300 it would be \$6, and on the whole amount \$630, thus showing a large increase in tax over the corporation paying the larger wages as compared with net profits.

This plan of reaching trusts, it is true, could be simplified by making the paid up capital of each trust, which remains fixed, instead of its wage account, which varies each year, the basis, and by graduating the tax to be levied according to the ratio of the income to paid up capital, instead of according to the ratio of such income to wages paid. With the basis of graduation thus changed the foregoing illustrations, under the same rate of tax, would furnish quite different results. In the first case the first \$1000 of net income would be taxed

\$10, the second \$1000 would be taxed \$20, and the tax on the whole \$5000 would be \$150. In the second case the tax on the whole net income of \$6000 would reach \$210.

This method of graduation would perhaps be practicable if the raising of revenue were to be the only aim of the remedial income tax. But as it would encourage increase in capital only and not increase in wage account, it would fail in accomplishing one of the ends most desired, and for that reason it need not be considered at length by those who are searching for the most practicable solution of the trust problem. The rate employed in the foregoing cases is not proposed with a view of fixing the standard, but is used only by way of illustration. If the wisdom of employing the newly found principle of graduation, in properly placing the burdens of taxation, is admitted, the most painstaking efforts of our ablest economists will be required to find a standard that shall be neither ineffectual in furthering the end desired nor confiscatory. They will have to work out the details of a plan which will enable practical application of this principle in taxing incomes, however disproportionate may be their ratio to wages paid.

This principle seems to point out a way of dealing with the social problem which lies between the extremes of individualism and socialism. It must appeal to the social reformer who believes in reforms on conservative lines, and who considers the trust problem but a phase of a wider social problem. Even the socialist, whose purity of motive is not in doubt, must perceive its merit. The latter ascribes most social ills to the private ownership of the material instruments of production and distribution, and demands their socialization in order that the reward of labor may be more equitably divided. His demands, however, include the overthrow of the existing social order. This principle aims at curing these ills through measures consistent with and operative under this order. By its aid the state, without socializing industries, but under individual ownership and control of such industries, is to encourage an equitable division of the reward of labor among those whose efforts have participated in the production of such reward.

If we fail in solving the social problem by one of the many, or by a union of some or all of the methods that have been suggested from time to time, or if we fail in crushing the power to do evil possessed by the gigantic combinations of capital which are multiplying with such amazing rapidity, and which threaten to hold consumers and

wage-earners alike so fully at their mercy, shall we not in time be confronted with the alternative of submitting helplessly to their dominion or assuming ownership of them. Even now socialists welcome these industrial giants as a step in the direction of eventual socialization of industries and the overthrow of the existing social order. Were we to discover a practicable way of imposing a federal income tax graduated in accordance with the principle hereinbefore suggested, there would be reason to hope that benefits exceeding our most sanguine expectation would follow, and the trust problem, if not the wider social problem, would give greater promise of eventual solution.

The following are some of the results to be looked for: Offending trusts and corporations, and, it may be hoped, eventually, individuals too, would be pressed to abstain from exacting excessive tribute from consumers and wage earners, or, failing so to abstain, would be forced to make amends in proportion to the extent to which labor, privileges and powers were exploited by them. Rises in prices unaccompanied by proportionate rises in wages, and reductions of wages unaccompanied by proportionate reductions in prices, would be discouraged. Trusts and corporations would carry only such chains as they chose to forge for themselves. To the most powerful of these, if content with moderate profits, the touch of this tax would be as light as to the humblest individual. Their burdens would increase with the measure of their greed. Dangers from monopolies would be reduced to a minimum. Exploitation of labor would become less common. Wages would rise. Those from whose efforts profits result would be certain of a more equitable share therein. Wage-earners, guaranteed an equitable share of the reward of their efforts through federal intervention, would become more content. Strikes and labor troubles would be avoided, and industries, freed from these, would attract unlimited capital looking for moderate returns. Individuals would take warning that capital when co-operating with labor in production must restrict itself to reasonable profits. And the government, in receipt of abundant revenue from those best able to carry the burdens of taxation, could lighten the burdens of those ill able to carry them.

I have discussed this tax as a means of dealing with trusts and corporations only. If effective as such its scope admits of enlargement. A fair and frank discussion of it will at least determine what it merits it possesses, and to what extent it admits of being employed in solving the trust problem.

C. A. FICKE.

DAVENPORT, IOWA.

THE CONDITION OF THE NEGRO IN PHILADELPHIA.<sup>1</sup>

THE sociological study whose results are set forth in Dr. Du Bois's book on the Philadelphia negro had its origin in the desire on the part of a number of men and women of Philadelphia, interested in questions of social reform, for a foundation of definite knowledge on which to base their efforts. This desire culminated in a plan of co-operation between the Wharton School of the University of Pennsylvania and the Philadelphia College Settlement, by which each was to furnish a trained investigator, the Department of Finance and Economy at the university undertaking the general supervision of the entire work and the publication of results.

Dr. Du Bois was appointed assistant in sociology at the university for the special purpose of carrying on the work, and Miss Eaton, a graduate of Smith College, was secured as fellow by the College Settlement. Miss Eaton's time was specially devoted to the investigation of the negro in domestic service. The fact that while the negro forms only  $12\frac{1}{2}$  per cent. of the population of the United States he performs about 29 per cent. of the domestic service, made it seem desirable that special attention should be given to that form of economic activity.

The book, as a whole, is probably one of the most important contributions we have yet had toward the study of the negro problem in the United States. It is a commonplace to say that any attempt at solving a problem should be preceded by a clear understanding of what the problem involves.

The great value of this particular study lies in the fact that it presents a concrete, definite picture of the family, social, and economic life of a large negro population, in a great northern city. It is based on information gathered together by a man particularly well fitted by intellectual training, tact, and sympathy to reach the facts of the case, to see them in their true proportions, to separate cause from effect, to trace out the action of special environment, and beyond this, to set forth the results of his study in a clear, concise, and scientific manner. As, aside from the work on domestic service, all the investigation was

<sup>1</sup>*The Philadelphia Negro: a Social Study.* By W. E. BRUGHARDT DU BOIS, PH.D. Together with a special report on Domestic Service, by ISABEL EATON, A.M. Published for the University of Pennsylvania. Boston: Ginn & Co., 1899. 8vo, pp. xx + 520. Price \$2.00; cloth \$2.50.

made by one person, Dr. Du Bois himself, the errors in many statistical investigations, arising from a differing personal equation, were eliminated and the results are comparable among themselves.

Philadelphia affords one of the most favorable places for such a study, both on account of the large absolute size of the negro population and on account of the fact that almost all grades of efficiency and social conditions are to be found there. Many of the better class of colored families have been settled in the city for half a century or more, while a still larger per cent. consists of immigrants from the agricultural sections of the South, particularly from Virginia and Maryland. Of all the large cities in the United States only Washington, New Orleans, and Baltimore have as large an absolute negro population as Philadelphia. In 1890 its negro population amounted to 39,371. At the present time it is well into the forty thousands. It is interesting to note that the study of the Philadelphia negro means the study of a group of people as numerous as the population of Harrisburg, the capital of Pennsylvania, in 1890, and as large as was Philadelphia itself at the beginning of the century (p. 52). An accurate study of so large a group cannot fail to throw some light on the negro problem as a whole.

The Seventh Ward of Philadelphia, bounded by Spruce and South streets on the north and south, by Seventh street on the east and the Schuylkill River on the west, has within its boundaries about one fourth of the negro population of the city, and, owing to its location and shape, contains all the typical classes. This ward was made the basis of an intensive study, carried on by a house-to-house canvass, supplemented by a less detailed but still careful examination of the negro population of the other wards of the city, and a use of all previous statistical and historical material available for purposes of comparison.<sup>1</sup>

Dr. Du Bois recognizes the economic side of the problem as that which presents at the same time the greatest importance and the greatest difficulties. He states the situation on page 97 :

For a group of freedmen the question of economic survival is the most pressing of all questions ; the problem as to how, under the circumstances of modern life, any group of people can earn a decent living, so as to maintain their standard of life, it is not always easy to answer. But when the question

<sup>1</sup> For details of scope and method of problem see first eight pages of the work, *The schedules used are printed in Appendix A, pp. 400 et seq.*

is complicated by the fact that the group has a low degree of efficiency on account of previous training; is in competition with well-trained, eager, and often ruthless competitors; is more or less handicapped by a somewhat indefinite, but existent and wide-reaching discrimination; and finally, is seeking not merely to maintain a standard of living, but steadily to raise it to a higher plane—such a situation presents baffling problems to the sociologist and philanthropist.

Before proceeding to the discussion of industrial efficiency, Dr. Du Bois devotes several chapters to a historical review of the negro in Philadelphia, and to an examination of the size, age, sex, and conjugal condition of the negro population at the present time, to a study of the sources of the negro population, and to its education and illiteracy past and present. All these are considerations which have important bearings on the industrial problem. Having outlined the complicated situation, he asks, "What are the present results?"

What do the mass of the negroes of the city at present do for a living and how successful are they in those lines? And in so far as they are successful, what have they accomplished, and when they are inefficient in their present sphere of work what is the cause and remedy (p. 98)?

Statistical tables show in great detail the exact employments of the negroes of the Seventh Ward. A summary of these tables shows that of the 9675 negroes in that section 1212 are children nine years of age or less. Of the remaining 8463 there are (p. 108):

At work	-	-	-	-	-	-	-	6,610
In school	-	-	-	-	-	-	-	609
Housewives	-	-	-	-	-	-	-	568
Known criminals	-	-	-	-	-	-	-	116
Unoccupied, at home, defective, unknown, etc.	-	-	-	-	-	-	-	560
								<hr/> 8,463

The 6610 at work are distributed as follows:

Professions	-	-	-	-	-	-	-	101
Working on own account	-	-	-	-	-	-	-	268
In trades	-	-	-	-	-	-	-	492
Clerks, semi-professional and responsible workers								212
Laborers (select)	-	-	-	-	-	-	-	778
Laborers (ordinary)	-	-	-	-	-	-	-	2,111
Servants	-	-	-	-	-	-	-	2,644
								<hr/> 6,610

We can grasp the true meaning of these figures only by comparing the distribution of occupations among the negroes with that of the total population of the city; for this purpose we must redistribute the occupations according to the simpler, but in many respects unsatisfactory divisions of the United States Census. We then have (p. 108):

	Whole population of Philadelphia, 1890		Negroes of Seventh ward, 1896	
	Number	Per cent.	Number	Per cent.
Total population over 10 - - - - -	847,283		8,463	
Number in gainful occupations - - - - -	466,791		6,611	
Per cent. in gainful occupations - - - - -		55.1		78
Engaged in agriculture - - - - -	6,497	1.5	11	.2
Engaged in professional service - - - - -	19,438	4.2	130*	2.0
Engaged in domestic and personal service - - - - -	106,129	22.7	4,889	74.3
Engaged in trade and transportation - - - - -	115,462	24.7	1,006	15.3
Engaged in manufacturing and mechanical industries	219,265	46.9	541	8.2

\* Omitting 24 students 21 years of age and over.

A comparison of these statistics shows a percentage very much greater than that of the general average for the city of those engaged in gainful occupations. It is what was to be anticipated. According to Dr. Du Bois it indicates an absence of accumulated wealth, arising from poverty and low wages. The causes of poverty are largely historical in character. Low wages are explained when we consider the few occupations to which the negroes are limited and the great competition that ensues.

This is true among the men and especially true among the women, where the limitation is greatest. All the forces that are impelling white women to become bread-winners are emphasized in the case of negro women; their chances of marriage are decreased by the low wages of the men and the large excess of their own sex in the great cities;<sup>1</sup> they must work, and if there are few chances open they must suffer from competition in wages. Among the men low wages means either enforced celibacy or irregular and often dissipated lives, or homes where the wife and mother must also be a bread-winner. . . . 16.3 per cent. of the native white women of native parents and of all ages, in Philadelphia, are bread-winners; their occupations

<sup>1</sup> In Philadelphia there are 1383 females to every 1000 males. The excess is largely explained by the fact that from the beginning opportunities for women in large cities have been greater than those for men through their large employment in domestic service (p. 54).



are restricted, and there is great competition; yet among negro women, where the restriction in occupation reaches its greatest limit, nevertheless 43 per cent. are bread-winners, and their wages are at the lowest point in all cases save in some lines of domestic service where custom holds them at certain figures; even here, however, the tendency is downward (pp. 110, 111).

The causes which limit the occupations of the negro are twofold—first the inefficiency which comes from lack of experience and training, and second, the prejudice of the whites.

On the first point Dr. Du Bois says (pp. 133, 134):

The most noticeable thing about the negro laborers as a whole is their uneven quality. There are some first-class, capable and willing workers, who have held their positions for years and give perfect satisfaction. On the other hand, there are numbers of inefficient and unintelligent laborers, on whom employers cannot rely and who are below average American labor in ability. This unevenness arises from two causes: the different training of the various groups of negroes comprising the city population; some are descendants of generations of free negroes; some of trained house-servants, long in close contact with their masters' families; others are the sons of field-hands, untouched and untrained by contact with civilized institutions; all this vast difference in preparation shows vast differences in results. The second reason lies in the increased competition within the group, and the growing lack of incentive to good work, owing to the difficulty of escaping from manual toil into higher and better paid callings; the higher classes of white labor are continually being incorporated into the skilled trades, or clerical workers, or other higher grades of labor. Sometimes this happens with negroes, but not often. The first-class ditcher can seldom become foreman of a gang; the hod-carrier can seldom become a mason; the porter cannot have much hope of being a clerk, or the elevator boy of becoming a salesman. Consequently we find the ranks of the laborers among negroes filled to an unusual extent with disappointed men, with men who have lost the incentive to excel, and have become chronic grumblers and complainers, spreading this spirit further than it would naturally go. At the same time this shutting off the natural outlet for ability means an increase of competition for ordinary work.

Again the action of the trades unions, which, with few exceptions, practically exclude negroes from membership, has shut them out of occupations for which many of them are well fitted. In the middle of the century a considerably larger number were engaged in Philadelphia in such trades as carpentering, masonry, and plastering. The exclusion is maintained in some cases by the insertion of the word "white"

among the qualifications for membership. More often there is no general rule, local bodies being left to their own discretion in the matter. This means that where negro labor is competent and a considerable factor as to quantity, as in western Pennsylvania among miners and iron-workers, they are not only allowed, but solicited, to join the unions. Where they are few in number and comparatively inefficient, it is impossible for even a skilled workman to gain admission. In Philadelphia they are well represented in the cigar-makers union.

The carpenters, masons, painters, iron-workers, etc., have succeeded in keeping out nearly all negro workmen by simply declining to work with non-union men and refusing to let colored men join the union (p. 128).

This refusal is not so much a matter of class prejudice as it is the grasping and keeping of an economic advantage.

Class prejudice is, however, one of the chief causes which prevent the negro from acquiring experience and from gaining in efficiency by doing. It is shown by the investigation that, as a rule, it is difficult for a negro family, no matter how respectable, to rent a house on a good residence street, in a respectable neighborhood occupied chiefly by whites. As a result of this discrimination in the matter of renting at fair rates, the negro is restricted to certain portions of the city inhabited chiefly by his own race, or by the lowest of the foreign white population. All the incentive that would come from living beside people whose standard of life is possibly higher than his own is lost. Imitation, which sociologists have shown to be so powerful a force in molding a civilization, has a limited opportunity in which to work. This herding together results, in turn, in an identification, in popular opinion, of the better element of the mass with the less efficient and criminal element, a lack of discrimination which removes one of the most powerful incentives to rise.

The delicate question of class prejudice is treated by Dr. Du Bois with great restraint and impartiality. The tone is not that of a reformer pleading for justice against a great wrong, but that of the scientific investigator who looks at things as they are and states what he sees without praise or blame.

He acknowledges that most negroes

regard this prejudice as the chief cause of their present unfortunate condition. On the other hand, most white people are quite unconscious of any such powerful and vindictive feeling; they regard color prejudice as the easily explicable feeling that intimate social intercourse with a lower race is

not only undesirable but impracticable if our present standards of culture are to be maintained (p. 322).

The truth Dr. Du Bois believes to lie between these two extremes. The practical results of such prejudice as exists today in Philadelphia he finds to be on the economic side (pp. 323, 324).

1. As to getting work :

No matter how well trained a negro may be, or how fitted for work of any kind, he cannot in the ordinary course of competition hope to be much more than a menial servant.

He cannot get clerical or supervisory work to do save in exceptional cases.

He cannot teach save in a few of the remaining negro schools.

He cannot become a mechanic except for small transient jobs, and cannot join a trades union.

A negro woman has but three careers open to her in this city : domestic service, sewing, or married life.

2. As to keeping work :

The negro suffers in competition more severely than white men.

Change in fashion is causing him to be replaced by whites in the better paid positions of domestic service.

Whim and accident will cause him to lose a hard-earned place more quickly than the same things would affect a white man.

Being few in number compared with the whites, the crime or carelessness of a few of his race is easily imputed to all, and the reputation of the good, industrious, and reliable suffers thereby.

Because negro workmen may not often work side by side with white workmen, the individual black workman is rated, not by his own efficiency, but by the efficiency of a whole group of black fellow workmen, which may often be low.

Because of these difficulties which virtually increase competition in his case he is forced to take lower wages for the same work than white workmen.

3. As to entering new lines of work :

Men are used to seeing negroes in inferior positions ; when, therefore, by any chance a negro gets in a better position, most men immediately conclude that he is not fitted for it, even before he has a chance to show his fitness.

If, therefore, he set up a store, men will not patronize him.

If he is put into public position men will complain.

If he gain a position in the commercial world, men will quietly secure his dismissal or see that a white man succeeds him.

4. As to his expenditure :

The comparative smallness of the patronage of the negro, and the dislike of other customers, makes it usual to increase the charges or difficulties in certain directions in which a negro must spend money.

He must pay more house rent for worse houses than most white people pay. He is sometimes liable to insult or reluctant service in some restaurants, hotels and stores, at public resorts, theaters and places of recreation; and at nearly all barber shops.

5. As to his children :

The negro finds it extremely difficult to rear children in such an atmosphere and not have them either cringing or impudent; if he impresses upon them patience with their lot, they may grow up satisfied with their condition; if he inspires them with ambition to rise, they may grow to despise their own people, hate the whites, and become embittered with the world.

In such economic conditions what are the incomes a negro may hope to win, and does he ever succeed in accumulating property?

Exact data with regard to incomes were very difficult to obtain, and the result must be regarded simply as careful estimates. Considering a family of five as the unit, Dr. Du Bois reaches the conclusion that about 19 per cent. of the negro families in the Seventh Ward earn \$5 and less per week on the average; 48 per cent. earn between \$5 and \$10; 26 per cent. \$10 to \$15; and 8 per cent. over \$15 per week. They are thus divided roughly into four groups: first, the "very poor and poor;" second, "fair;" third, "comfortable;" and fourth, "in good circumstances." As Dr. Du Bois notes, the whole division into "poor," "comfortable," and "well-to-do," depends primarily on the standard of living among a people. An examination into typical family budgets in each class shows one feature common to all. It is commented upon as follows (p. 178):

Probably few poor nations waste more money by thoughtless and unreasonable expenditure than the American negro, and especially those living in large cities like Philadelphia. First, they waste much money in poor food and in unhealthful methods of cooking. The meat bill of the average negro family would surprise a French or German peasant, or even an Englishman. The crowds that line Lombard street on Sundays are dressed far beyond their means; much money is wasted in extravagantly furnished parlors, dining rooms, guest chambers, and other visible parts of the homes. Thousands of dollars are annually wasted in excessive rents, in doubtful "societies" of all kinds and descriptions, in amusements of various kinds, and in miscellaneous ornaments and gewgaws.

This living up to or in excess of income naturally prevents any accumulation of property. Nevertheless there are exceptions. From the best evidence available it appears that

One hundred and twenty three of the 2441 families in the Seventh Ward, or 5.3 per cent., own property in the ward; 75 other families own property outside the ward, making in all 197, or 8 per cent. of the families who are property holders. It is possible that omissions may raise this total to 10 per cent. The total value of this property is partly conjectural, but a careful estimate would place it at about one million dollars, or  $4\frac{1}{2}$  per cent. of a ward where the negroes form 42 per cent. of the population (p 179).

A prominent colored citizen of Philadelphia once said in a public address, that the course of Philadelphians toward the negroes, in making every effort to give them an education and then shutting them out of every better avenue of industry was much like that of an engineer who gets up steam in his boilers and then sits on the safety valve. Dr. Du Bois's investigation of the educational facilities of Philadelphia show that in that city, at least, it is quite possible for a negro boy to pass from the lowest primary grade through the high school and into the university. Very few, however, can or do take advantage of this possibility. Still the question of education, in its ordinary sense, *i. e.*, the passing through school and college, is not the most pressing question at this time. "To educate boys and girls and then to refuse them work is to train loafers and rogues" (p. 354).

The serious obstacle to progress at the present has arisen through lack of opportunity, unrewarded merit, and unsatisfied ambition. These have created a social environment very dangerous to the growing boy and girl.

For thirty years and more Philadelphia has said to its black children: "Honesty, efficiency, and talent have little to do with your success; if you work hard, spend little, and are good you may earn your bread and butter at these sorts of work which we frankly confess we despise; if you are dishonest and lazy, the state will furnish you bread free." Thus the class of negroes which the prejudices of the city have distinctly encouraged is that of the criminal, the lazy, and the shiftless; for them the city teems with institutions and charities; for them there is succor and sympathy; for them Philadelphians are thinking and planning; but for the educated and industrious young colored man who wants work and not platitudes, wages and not alms, just rewards and not sermons; for such colored men Philadelphia apparently has no use (pp. 351, 352).

So much space has been given to an attempt to show something of Dr. Du Bois's conclusions respecting occupations and causes affecting their limitation, that it is only possible to mention the chapters on Health; the Family Life; Organized Life, including charities, secret and benefit societies, and co-operative business; the Negro Criminal; the Environment of the Negro, *i. e.*, section and ward, housing, social classes and amusements; the Contract of the Races, including the question of intermarriage, and Negro Suffrage.

In the short final chapter Dr. Du Bois allows himself a word as to "the meaning of all this." The negro problem seems to be bewilderingly complicated, nevertheless it is not more hopelessly complex than many others have been which have been solved by time. The possible solution offered in the gradual dying out of the race is rejected.

A nation that has endured the slave trade, slavery, reconstruction, and present prejudice three hundred years, and under it increased in numbers and efficiency, is not in any immediate danger of extinction. Nor is the thought of voluntary or involuntary emigration more than a dream of men who forget that there are half as many negroes in the United States as Spaniards in Spain. If this be so, a few plain propositions may be laid down as axiomatic:

1. The negro is here to stay.
2. It is to the advantage of all, both black and white, that every negro should make the best of himself.
3. It is the duty of the negro to raise himself by every effort to the standards of modern civilization and not to lower these standards in any degree.
4. It is the duty of the white people to guard their civilization against debauchment by themselves or others; but in order to do this it is not necessary to hinder and retard the efforts of an earnest people to rise, simply because they lack faith in the ability of that people.
5. With these duties in mind and with a spirit of self-help, mutual aid and co-operation, the two races should strive side by side to realize the ideals of the republic and make this truly a land of equal opportunity for all men (pp. 388, 389).

In the *Special Report on Negro Domestic Service* (pp. 427-509), Miss Eaton points out the importance of the study in the light not only of its relation to the negro problem but to the vexed question of domestic service in general. The colored population of the United States

Perform about three times as much domestic service in proportion to their numbers as the whites do. From this it will be seen that while the study of domestic service in any consideration of the condition of the colored people is important, the study of the negro domestic is equally important in any careful consideration of the domestic service problem (p. 433).

The returns of the last census show that very nearly 60 per cent. of the colored working men of Pennsylvania are engaged in domestic service, while over 91 per cent. of the colored working women of the state are in service (p. 428). This proportion is greater than that found in the Seventh Ward, but in the census classes of persons are included which are scheduled elsewhere in this report.

The great source of supply of Philadelphia's domestic service comes from Maryland and Virginia, these two states contributing 48.2 per cent. of the total. An investigation as to the age of domestic servants shows that nearly one half the colored domestics of Philadelphia, both men and women, are included in the age period between twenty-one and thirty years.

The chapter on grades of service brings out facts of considerable interest. It shows that men in domestic service receive close upon 100 per cent. more wages than women. There is greater equality, however, between the wages of white and colored women than between that of white and colored men. The results of the investigation seem to show that color makes little difference in the former case while in the case of men, in the higher grades of service at least, the whites receive a considerably larger wage. This is largely owing to fashion, since the English butler, coachman, etc., are at present the proper thing. The supply being more limited, the pay rises.

The following table explains why Englishmen, accustomed to domestic service at home, are attracted to the United States.

An absolute money wage, in many cases 100 per cent. greater, is a strong attraction to emigration.

TABLE X (p. 452).

## TABLE COMPARING ENGLISH AND AMERICAN "MONEY WAGES."

(Annual amounts over and above board and lodging.)

Sub-occupations		London <sup>1</sup>	Colored domestics in Philadelphia	United States	Philadelphia
Women	General servant - - -	\$ 77.50	\$168.48	Aver. women's wgs \$167.96	Aver. women's wgs \$179.92
	House maid - - -	82.50	164.84		
	Cook - - -	109.50	209.04		
Men	Errand boy - - -	55.00	135.72	Average men's wages \$373.36	Aver. colored men's wages \$335.40
	Footman, coachman - -	175.00	446.16		
	Butler { colored - - - white - - -	300.00	{ 428.48 540.00		

<sup>1</sup> CHARLES BOOTH, *Life and Labor of the People*, vol. viii. pp. 217, 223.<sup>2</sup> SALMON, *Domestic Service*, p. 28.

On page 453 the question of the effect of board and lodging on wages is considered. Miss Eaton says:

In the Philadelphia investigation the facts upon this point seem to indicate that the amount of wages is only slightly affected, if at all, by the question of board and lodging. When these are given in addition to wages they apparently do not stand, in the mind of either employer or domestic, as part payment for service. A comparison of the pay of women cooks, who lodge at their place of work, with that of women cooks who lodge at home, will illustrate this. The average pay of those who lodge at their place of work, and therefore receive board and lodging in addition to wages, is \$4.13, as contrasted with \$3.95 received by those who go home at night. Here the difference will be seen to be in the opposite direction from what we should expect if board and lodging are included as part of the wages of cooks. The same facts hold good for the other sub-occupations among colored domestic servants in the ward.

A comparison of wages of colored domestics with the wages of those in other occupations, shows that for the women it is one of the well-paid employments. This is true not only of colored but white domestics, as the investigation of Miss Salmon into the comparative savings of domestics, public-school teachers, and factory operators shows.<sup>1</sup>

The chapter on savings and expenditure brings out the interesting fact that, as a rule, in spite of their much larger wages, the men domestics do much less than the women toward the support of dependents. The per cent. of those who save is about the same in both sexes. The figures must be taken with considerable allowance, but with the best results attainable there were only about 15 per cent. in both sexes who saved nothing at all. The men, as a rule, prefer to deposit their savings in savings banks, while there seems to be a rather general distrust of banks on the part of the women. They prefer "societies," or saving at home.

Other chapters treat of Amusements and Recreations, Length and Quality of Domestic Service and Conjugal Conditions, Illiteracy and Health.

"In view of the general purpose of the investigation," Miss Eaton considers, in the last chapter, ideals of betterment in Philadelphia Negro Domestic Service, which she believes to be no different from the "ideals" of domestic service as a whole. "When the domestic

<sup>1</sup> L. M. SALMON, *Domestic Service*, p. 446.



becomes a 'trained worker, honorable and dignified,'" the great objection now felt in the loss of social standing and in the personal relations between employers and employee will be met.

Miss Eaton's report is valuable for the light it throws on an important side of the negro problem, but it may not be amiss to point out that it is perhaps of still broader social worth in being the third scientific attempt<sup>1</sup> to find a basis of fact for the study of domestic service in general.

KATHARINE BEMENT DAVIS.

<sup>1</sup> The two previous studies are CHARLES BOOTH's *Life and Labor of the People*, vol. viii., and MISS SALMON's *Domestic Service*.

## BOOK REVIEWS.

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*Science of Statistics: Part II, Statistics and Economics.* By RICHMOND MAYO-SMITH. New York: The Macmillan Company, 1899. Pp. xiii+467.

THE appearance of the promised second volume of Professor Mayo-Smith's *Science of Statistics* has been awaited with interest by students of statistics in the United States. While the mass of official statistics concerning economic conditions has grown at a rapid rate, but comparatively little has been done in the way of subjecting this material to a rigid critical examination with a view to determining its value and the more important conclusions to be drawn from it. This lack was to a certain extent met by the report of the Committee of the American Economic Association on the Twelfth Census. This work, however, was restricted to the consideration of those subjects only to which the census relates, and was prepared by different persons to a considerable extent working independently of each other. In the present volume we have a methodical treatment from a single pen of economic statistics generally. Professor Mayo-Smith's work thus has as its first merit that it meets a real want.

In successive chapters the author examines available statistics concerning the more important features of economic life: Consumption, Population as a Labor Force, Land as a Factor of Production, Capital, Wealth, Prices, Money and Credit, Transportation and Commerce, Wages, Rents, Interest and Profits, Labor Disputes, Associations, Finance, Statistics, and Wealth and Incomes and their Distribution. The method pursued, that of first stating the economic question and then following with a consideration of the statistical material that bears upon it, has the great value of bringing out the gaps in the statistical information that it is desirable to have, as well as the material that is actually in existence.

While Professor Mayo-Smith has undoubtedly given us an exceedingly valuable analysis and criticism of existing economic statistics, and one that will contribute not a little to the advancement of the study of statistics in the United States, his work is open to criticism in one or two respects. The first of these is, that as regards a number of

important questions involving a choice of methods, the author has not always stated clearly his own conclusions. After reproducing certain statistics, reference is repeatedly made by a footnote, as on pages 78, 82, and 97 for example, to the fact that the validity of the method pursued in their compilation has been questioned, without any expression of opinion as to whether such criticism is justified or not. In other cases the pros and cons of a problem are given without any attempt to state a conclusion.

A second criticism relates rather to what the book is not than to what it is. The general title *Science of Statistics* is scarcely justified by the contents. Leaving aside the more than doubtful claim of statistics to be considered a science, a book so entitled should cover the whole ground of statistics in a fairly comprehensive and well proportioned way, with especial emphasis upon general rather than particular methods of procedure. This the work does not do. The great problems with which the directors of statistical work have to deal receive but scant or no attention. Of the subjects treated some are considered at length while others of equal importance receive but brief mention. As an instance of the latter may be mentioned the important class of provident and savings institutions which are scarcely mentioned though they are peculiarly susceptible of statistical treatment.

In conclusion, it should be said, that by the foregoing criticism it is by no means intended to convey the idea that Professor Mayo-Smith's book is other than one of extreme value to all persons interested either in statistics or economics. It was only desired to point out what to us seemed the ground that is and is not covered by it. With the method and conclusions of the author when expressed it is difficult to find fault. The questions treated have been handled with a rare skill, and the two volumes stand today as the best treatise on statistics in English and compare favorably with any in a foreign language.

W. F. WILLOUGHBY.

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*The Growth of Cities in the Nineteenth Century: A Study in Statistics.*  
By A. F. WEBER. (Studies in History, Economics, and Public Law, XI, edited by the Faculty of Political Science of Columbia University.) New York: The Macmillan Company, 1899, pp. xvi + 495.

THIS remarkably well-executed monograph is an outgrowth of a doctoral dissertation. It fully warrants its expansion into this more

attractive shape for the purposes of the general reader, dealing as it does with a striking phenomenon of the nineteenth century. No previous work in English deals at all so comprehensively with the subject; and none of the foreign ones, of which there are several, contains any extended treatment of the American data.

The first chapter contains an admirable discussion of statistical methods to be used in the determination of the facts concerning "agglomeration." The fallacy in average density of population statistics is made clear. Mere agglomeration, moreover, is insufficient as a social criterion, unless the absolute size of towns be also taken into account. The closely built hamlets of Europe represent agglomeration indeed as compared with American isolation; yet only when in excess of a certain size do they conform to the circumstances of real urban life.

After a comprehensive treatment of the history of urban growth the author engages in the third chapter in a discussion of the causes of urban concentration of population. Having already shown historically that the greatest general acceleration of urban growth has taken place since 1850, although in England and Scotland, Belgium, Saxony, and France in diminishing degrees, such concentration somewhat antedates the middle of the century, the prime causes in such movements are incidentally suggested as the industrial revolution and the development of transportation services. Such economic causes inherent in modern capitalism are strongly re-enforced by other social and political ones. Thus men, once grafted upon urban life, permanently acquire the social habit, just as industrial promoters tell us that they take on the telephone, the typewriter, and the street-car habit. Coincidentally with all these changes of material habits, and more important than any of them, they acquire the ambition habit. Being well out of the rut of customary observance, they begin to aspire socially. Social aspirations can never flourish on a truly agricultural basis. They may persist on a land-owning basis, as in England today, but never on one of actual cultivation as a means of livelihood. And finally among causes of agglomeration is to be mentioned the political one, of centralization of administration.

Urban growth and internal migration form the main topics in chapter IV. Recent rapidity of urban growth is, in a very suggestive criticism, shown to be due not so much to accelerated migration cityward as to a diminution of urban death rates. It is not that so many

more men relatively emigrate to the towns which causes their phenomenal increase of size, but that those who are already there or go there live longer and better. To use a phrase, which I have coined for use elsewhere, the ratio of urban "persistency" has become greater. This study of internal migration in Europe and America brings out at the hands of our author several significant facts. It is predominantly for short distances. The spheres of attraction are variable according to the size and importance of the town, although American modes of migration city-ward betray some peculiarities in these respects.

Chapters v, vi, and vii are admirable examples of statistical analysis, dealing with the demographic peculiarities of urban population. Such populations contain an unusual proportion of women, of middle-aged adults, and usually of those of foreign birth. The striking fact, however, is emphasized that "in the United States and in most of the commonwealths the percentage of foreigners has uniformly and almost steadily increased since 1850, while on the other hand it *has decreased in the cities.*" This is contrary to common opinion, but appears to be true exactly as stated. Other vital peculiarities of urban populations are shown to be the existence of a distinctly higher divorce rate and an abnormal death rate as compared with the country; but, on the other hand, marriage and birth rates are but little above the country standard, except in England and the United States. The overwhelming predominance of social over mere numerical considerations in the determination of such phenomena is very well emphasized. We are strongly tempted, did the limits of this review permit, to examine the very interesting question in this connection respecting the fact and causes for the greater proportion of female births in city populations. Some years ago<sup>1</sup> we ventured to suggest ethnic crossing as a partial explanation for the phenomenon. Diligent search since then has shown the phenomenon to be too general to strengthen this hypothesis. It remains, however, not impossible that the lesser degree of inbreeding may be of contributory influence. A problem in pure science awaits analysis so soon as data is available.

Our author, rather unduly, perhaps, disparages the value of existing vital statistics in the United States, sharing the general impression therein. We are inclined to take issue with this; and to maintain that a large mass of good raw statistical material is in existence in records

<sup>1</sup> "Ethnic Influences in Vital Statistics," *Publications of the American Statistical Association*, n. s., vol. v. 1896, p. 23.

and elsewhere. It needs publication, of course, and the calculation of rates on a population basis, before it can become available for general use.<sup>1</sup>

Chapter VII, upon the physical and moral health of city and country, deals at length with the sociological theories of Hansen, Ammon, and Lapouge. The question at issue in them all is as to the degree of natural selection involved in city ward migrations and the growth of urban populations. Kuczynski, it would appear, has furnished the principal fund of ammunition utilized in this connection. There can be little doubt that Hansen and Ammon both overstated the case. The tendency of city populations is certainly not so rapidly downward as their hypotheses imply. Nevertheless the facts of selection, strongly operative, remains true. This, for example, would seem to be shown in the data respecting bodily stature, collated in our study of the physical anthropology of Europe.\* Dr. Weber had but half the facts in this connection at his command. While it is true, as he shows, that generally speaking urban populations are on the average shorter than rural ones, nevertheless a detailed analysis shows that this lower average of physical development is compounded of two elements. City populations contain an abnormally high proportion of stunted individuals; and in most cases an equally abnormal high proportion of finely developed ones, as compared with the country. A powerful process of social selection has attracted and favored the growth of each class in varying proportions. Any student in this field cannot but realize the great difficulty in utilizing social statistics in these ways. For example, the proportion of insanity is commonly taken as a test of deterioration, and the high proportion in city as compared with country, is quite generally held to be an unfavorable sign. Yet, consider how hazardous to argue on this question until we have more uniform practice in the treatment of the insane. In the cities insanity is quickly detected; it must be dealt with at once. A harmlessly insane person cannot be tolerated in a tenement as in an isolated farmhouse. Moreover, the classifications in city and country differ. Our Boston Board of Trustees of Pauper Institutions, on coming into power, proceeded at once and properly to cause the transfer of a large number of cases of senile dementia from the pauper

<sup>1</sup> Cf., for example, the admirable social study on Divorce from county records in Ashtabula county, Ohio, in the *Century Magazine*, vol. lix. (1900), pp. 636-640.

\* *The Races of Europe* (1899), pp. 552 et seq.

institutions to those for the care of the insane. This is rarely done in country towns. How different may be the effect of such practices is apparent at once. It may even be, that rightly classified and judged, there is no greater proportion of insanity in city than in country after all; perhaps even the reverse.

The two concluding chapters in Weber's work discuss the general effects of concentration of population; and present tendencies and remedies. Fees for settlement, agricultural improvements, village amusements, administrative decentralization, the growth of suburban transportation, and the possibilities of widespread distribution of electric power for use in house industry are all passed in review.

The work as a whole is a masterpiece of statistical research and of social analysis. It cannot fail to be of great use to all students engaged in investigation along these lines. The bibliographical details, despite their abundance, evince careful proof reading. The only improvement which could be suggested, would be the adoption of some definite scheme of reference, with full titles of all works cited in a separate list at the end. Typographical errors, such as we note on page 85 are rare; and good working indexes by author and subject serve to render the material easily accessible.

WILLIAM Z. RIPLEY.

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*Outline of Practical Sociology, with Special Reference to American Conditions.* By CARROLL D. WRIGHT, LL.D., U. S. Commissioner of Labor. New York: Longmans, Green & Co., 1899. 12mo. pp. xxviii + 431.

THE unity of a book may be scientific or artistic. In the former case it proceeds by successive logical steps from point to point until some whole has been described and the intrinsic connection of its parts displayed. In the latter case the unity is vital rather than logical; the thoughts or actions of some individual or group, real or fictitious, are the informing principle. In a study so inchoate as sociology, no high degree of scientific coherence is to be found, and the unity of the volume before us is almost as much artistic as scientific. It is a simple presentation of the results of a lifetime of investigation and thought upon the problems of modern American society. The motives for inclusion or exclusion of topics are more often personal experience or interest than the requirements of systematic presentation. A

genuine review of the book, therefore, should be a review of the life of which it is an outcome and epitome. It is largely statistical, not because the writer proves that this method should be more extensively employed than his predecessors in sociology have done, but because it is natural for him to reason in figures, as it is for a poet to write in meter. It is hopeful in tone with the buoyant optimism of a man who has made his own way and believes "God's in his heaven, all's right with his world." The writer has done as much as any living American to increase public interest in statistical study of social problems and this work brings into compact, if not connected, form his conclusions upon the population of the United States, its social and political groups, the city, the family, the school, the factory, wealth and poverty, drunkenness and crime.

In the definition of sociology the clear good sense of Commissioner Wright guides him to a conclusion that has been missed by many a more ambitious writer. Sociology is "the study of the origin and development of social institutions" (p. 2). In this definition the words, "origin and development," may be omitted, for they merely describe a method favored by many sociologists, the evolutionary method, the utility of which for the study of social phenomena is much overrated in popular thought. They do not aid in defining the field of study. But if sociology be "the study of social institutions" it is difficult to prove the unity of the subject and so its scientific character. What common characteristics have families, cities, trade unions, schools, factories, and prisons? Are the points of agreement so numerous and fundamental that for a study of them a separate science should be constituted? By the manner of his treatment the author seems to reply in the negative, but by the title of his book in the affirmative, and thus exposes himself to the objection that he is trying to blow hot and cold at once. Sociology is the popular word to conjure with and as a title to this book it covers social institutions so diverse and disconnected that the unity implied in the title is lost from view. Disregarding the claim implied in the title, however, the book is a welcome addition to our popular and elementary books describing social structure and life. It is healthful in tone and will be a corrective to much crude and shallow thinking, especially such as is pessimistic in its attitude towards present society and disposed to seek a way of escape in an increased compulsory subordination of the individual to the state.



*Practical Sociology* is designed for private reading, or as a text-book for elementary classes, and for both purposes it seems to me on the whole more serviceable than any other book I know. Yet certain faults call for mention in an appreciation of the book. When the writer enters the academic field he is not always sure-footed. He is fond of quoting the saying of "the German Schlosser that 'statistics is history ever advancing'" (p. 8). Perhaps not one American in a million cares a picayune whether this was said by Schlosser or Schlözer, but in fact they were two different men and the saying comes from the latter. But the quotation involves a more serious error. The sentence of Schlözer was "Statistik ist stillstehende Geschichte, Geschichte eine fortlaufende Statistik;"<sup>1</sup> that is, "Statistics is history at rest, history is statistics in progress," obviously a different notion from that in Commissioner Wright's translation. Still further, however, the meaning of the word "Statistik" in Schlözer's time was very different from that of statistics to us. To him it meant a descriptive political science making almost no use of numerical data, but rather, as its name implies, the science of states. Its votaries got into difficulties with the students of political history and Schlözer sought to make peace with a phrase. Political science, he said, is history with change disregarded, history is political science with the element of change introduced. His effort failed, but his phrase survived. It may have originated in Huder's saying twenty years earlier that political geography is history at rest and history geography in motion and it may have suggested to Freeman his "History is past politics; politics is present history," but it never meant the statistics in which our author and his readers are interested.

Errors of this sort, however, are very infrequent in the volume. A more common kind are those springing from an uncritical acceptance of authorities. The writer has worked over very wide fields and cannot have tilled deeply in all. Thus he says that the population of the coast swamps and the Mississippi alluvial region consists mainly of negroes (p. 29). The census volume so states, but a scrutiny of the tables, from which the inference is made (*Eleventh Census, Population*, I, xlvi *et seq.*), shows that whites compose more than half the population in the coast swamps. Again, the statement that the population of the country is increasing at all altitudes (p. 30) is drawn from the census volumes, but the table there found (*idem*, p. xlviii) shows that the population

<sup>1</sup>I have not been able to find a copy of the original, but both John and Meitzen give the sentence as quoted.

living between 9000 and 10,000 feet above sea level, *i. e.*, in Nevada and eastern California, decreased sharply between 1880 and 1890.

A few errors have been noticed so serious that one has to suspect they betray the hand of a subordinate whose work has not been reviewed and corrected with the requisite care. Thus the fact that in 1890, among the persons over twenty, there were about 377,000 more married men than married women, is explained by the influx as immigrants of married men, who have left their wives in the mother country (p. 153). One need not go so far to sea for an explanation and overlook the fact that among the persons under twenty, there are nearly three hundred thousand more married women than married men. That is, the number of women under twenty married to men over twenty exceeded the number of men under twenty married to women over twenty by 298,648, which accounts very simply for nearly four fifths of the excess of husbands in the population over twenty.

These are but minor and infrequent defects. The book is strong in its conception of sociology, in its instinctive emphasis upon statistical methods, in its spirit and temper, and in its successful maintenance of a happy mean between abstract profundity and feeble superficiality. It should lead many to go further in the subject and thus secure its highest end.

W. F. WILLCOX.

CENSUS OFFICE,  
Washington.

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*The Cost of Living as Modified by Sanitary Science.* By ELLEN H. RICHARDS. New York: John Wiley & Sons, 1899. 12mo. pp. 121.

THIS book consists of nine talks on the relation of domestic economy to social welfare. The author is speaking to that portion of the community dependent upon incomes of \$1500 to \$3000. They are told that household management today is, among all classes, both aimless and extravagant; that because of this waste in the center of consumption—the home—the social gains from improvements in production are largely neutralized and dissipated. Changes for the better are not to be expected from the wealthier classes who have no needs, nor from the masses who have no choice. Therefore the middle class is given the message, in the hope, that when convinced that it is to their interest as a class, they will set the example for the less fortunate

portion of the community, and initiator and imitator will work together for a much needed social economy.

The absence of a fixed plan or principle of selecting utilities is the great defect in household management. The effort toward a higher, fuller life must be conscious—choice not drifting—income must be spent with an ideal in view—expenditures must be confined to those objects which contribute to the attainment of that ideal. Sanitary science furnishes the criterion by which objects are to be selected or rejected viz., health—health of body and health of mind. The author not only criticises the typical budget of the present, but presents ideal budgets. We are shown how to study the nutrition value of various foods, the healthiness of different kinds of dwellings and location and clothing as well as the importance of various elements contributing to healthfulness of mind. The chapters are equally stimulating, and teem with practical suggestions. It is to be hoped that the author's prophecy will be fulfilled at no distant date, that the time is coming when educators and economists will unite in raising the home to its proper position, when household management will be regarded as a business, and when its director will be required to have knowledge and skill in some measure commensurate with the interests at stake.

For our purposes, however, the significance of the work is its economic philosophy. It reinforces, in a concrete, popular, imaginative way, the theory of eminent economists that the time has come for social philosophy to give more attention to problems of consumption. The management of a household is a great business—the distribution of the expenditure is of more importance to the middle and lower incomes than is the distribution of the product of industrial operations. Furthermore, we may confidently expect more directly to effect changes in the distribution of product, by teaching all classes to make better use of the share which actually comes to them, than by making them discontented with that share.

While exhorting to a higher motive than the desire to outdo one's neighbor, yet the author has skillfully taught the emulator and imitator how he may imitate with better success, if he will only study the investment in his home furnishings, foods, rentals etc. as he scrutinizes outlay in other business ventures. Thus again contributing an important suggestion, as to method of economic and sanitary education—it is not enough to antagonize existing institutions, it is necessary to suggest modifications which seem to enhance the values

of present utilities. Sanitary science brought to the aid of existing ideals, will surely accomplish more than when that science comes with a challenge to every taste and habit.

Social welfare demands of the twentieth-century housekeeper

First of all, a scientific understanding of the sanitary requirements of a human habitation ; second, a knowledge of the values, absolute and relative, of the various articles which are used in the house, including food ; third, a system of account-keeping that shall make possible a close watch upon expenses ; fourth, an ability to secure from others the best they have to give, and to maintain a high standard of honest work. The great industrial and economic questions of the twentieth-century center about household management. The higher purposes of home life must come into sight, and be the dominating factors unless the present civilization is to pass away.

WILLIAM ALLEN.

UNIVERSITY OF PENNSYLVANIA.

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*Monopolies and The People.* By CHARLES WHITING BAKER, C.E.

Third Edition. New York: G. P. Putnam's Sons, 1899.

8vo. pp. xxiii + 368.

TEN years having elapsed since Mr. Baker first brought out his *Monopolies and The People*, an enlarged edition is now issued, which in addition to the chapters published a decade ago, contains some hundred pages of new matter. A half of this is descriptive, giving a survey of the growth of trusts during the past ten years, and showing to what extent large organizations dominate various branches of industry. Though the details are not so full as some might wish, the account is interesting, and serves well to emphasize the industrial revolution now in progress. The remainder of the book presents some of the author's conclusions regarding the evils wrought by these changes, and his suggestion of remedies.

Despite the long-continued attention which the author has given the subject, it is legitimate to question whether the conclusions which he draws are valid, for the logic at times seems unsound, and the evidence adduced in support is not altogether satisfactory. One statement which challenges criticism is that a marked result of the recent development of corporations has been the decay of business morality. To substantiate this, an invidious comparison is made of railway management during the last decade and half a century ago.

To pass thus on the moral standards of an age is a task which should appal any mere student of economics. One should, however, be on guard against the almost irresistible tendency to find a golden age on every turned page of history. On the face of it, Marshall's position seems more credible. Corporations, instead of being a corrupting influence, so far as business morality goes are in themselves evidence of improvement. Never before have small capitalists had faith enough in business integrity to trust their savings irrevocably to the care of directors. That it is done on so vast a scale now argues for progress rather than decadence.

The illustration which the author has selected to prove this degeneration is unfortunately chosen. In the earlier days, says the author, (p. 325) railways were built with stock subscriptions, were managed with honesty and prudence, and the stock was a safe investment. Recent developments are supposed to show a change radical in degree and harmful in character. It is true that earlier railway financing depended less on mortgage bonds and more on stock. The advantage which the author infers, namely, that the promoters risked only their own capital, does not follow. From the beginning it was customary to solicit loans or contributions (even the loans frequently becoming contributions), from the state or municipality which the road traversed. To obtain donations from public authorities by methods at times approximating blackmail is not necessarily an improvement over borrowing on bond and mortgage. At least public opinion as mirrored in law does not think so, for the granting of municipal aid to railways has commonly been prohibited by state constitutions since 1870, while borrowing is still legal. As to honesty and prudence of management the evidence is no more satisfactory. In 1855 (a year which lies near the author's ideal era of half a century ago) the same complaints were made which are heard today. Directors were said to possess "none of the qualifications of fitness, study, and experience," and were charged with "prostituting their trust to promote their own private interests."<sup>1</sup> The statement that in the early days of railroading stock was a safe investment is altogether too sweeping. In 1835, a date certainly in the early days, "Prices of railroad stocks were generally speculative as the roads were unfinished and their success simply theoretical. The Harlem road sold as high as 190, and then fell to 65, all in five or six weeks, owing to a corner which was made."<sup>2</sup> Poor states that for the

<sup>1</sup> *Report of the New York Railroad Commission*, 1855, pp. xix. and xliii.

<sup>2</sup> MARTIN, *Twenty-one Years in the Boston Stock Market*, Boston, 1857, p. 75.

first twenty years of railroad history (1828-1847) even the best located lines were run at a loss. Nor was it the stock alone which was insecure. The present reviewer happens to have in his possession a bond which is said to be one of the first block ever issued by an American railway. As this was defaulted soon after issue it appears that even bondholders suffered then as well as now.

In multiplying accusations against large corporations the author makes complaints which seem to be mutually contradictory. Thus he criticises the trust both because it means the centering of wealth in a few hands (p. 339) and also because the controlling interest does not really own the property, that belonging to the bondholders (p. 320). Can wealth be centered in the hands of a few when all they own is worthless stock (p. 135)? As this stock pays no dividends (p. 321) how can it increase the wealth of the holders as a class? It is true that it may be sold at a profit, but only to other speculators, for no one ever buys common stock as an investment (p. 231), and only those buy who can afford to lose (p. 326). Transactions thus limited to a group of professional speculators are of comparatively little import to the general public. The police may well protect the unwary against the solicitations of a confidence man, but they need not worry over the performances of a close circle of wealthy poker players.

Again, the author says that labor is ground by corporations which select managers solely for their ability to secure dividends (p. 320), yet the only stock which the directors hold seldom or never pays a dividend (p. 321), and no great effort is made to run the business on a paying basis, since the directors' interest is purely speculative (p. 323). The statement that trusts injure the industries of the country by managing them on other than business principles harmonizes poorly with the apprehension that small competitors will be crowded out because the trusts can afford to hire more competent managers and experts (p. 350). When the harm done labor is under discussion it is said that the trust can seldom make a saving in buying raw material (p. 328); when the subject is the injury done small dealers, the ability of the large organization to buy more cheaply threatens the existence of the independent shopkeeper (p. 306). Enormous gains with no dividends, wealth consisting of worthless stock, good managers and bad management, bilking the public by selling stock which no one will buy, economy and extravagance,—surely the trust as portrayed by the author is of a protean character.

A few other criticisms may be briefly made. It is hardly correct to say that a fall in interest injures labor rather than the capitalist (p. 330); history does not support the claim that the great inventions of last century were in marked contrast to those of today in that the former worked immediately to the benefit of the laborer (p. 328); it is true that the apprentice's privilege of sitting at his master's table is denied American workmen (p. 319), it should not be forgotten that the same development has made him exempt from his master's floggings; and, finally, there is no "section of the constitution prohibiting even Congress from making any law annulling the obligations of contracts" (p. 343).

The last chapter of the book discusses the policy to be pursued regarding trusts. Although so severe in his arraignment of trusts the author recognizes that large organizations are a natural development, and criticises any attempt to abolish them. Instead of destroying he would control; and he recommends legislation to prevent over capitalization, stock gambling, and discrimination, and to secure publicity of accounts. As a means of enforcing such control the government should appoint directors to represent the public in the board of directors of each large corporation.

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*The Cost of Municipal Trading. A Paper Read before the Society of Arts*, by DIXON HENRY DAVIES (with the discussion thereon and diagrams). Reprinted, with additions from the *Journal of the Society of Arts*. London: P. S. King & Son, 1899. 8vo. pp. 71, with 6 charts.

THIS paper and the discussion upon it have to do with the undertaking by the municipality of enterprises or industries commonly known as public utilities. Mr. Davies believes the growing tendency of British cities to municipalize certain industries is greatly to be deplored, and he thinks Parliament should be asked to exercise a restraining influence by refusing to grant to cities the permission necessary to the enlargement of their municipal activities.

Mr. Davies bases his objections to "municipal enterprise" upon "general economic principles of limitation of state functions, applicable

to municipal government as well as imperial." The growth of what he terms the proper municipal functions requires, he says, all the attention and resources of the authorities. The undertaking of industries by the municipality must tend to develop a bureaucracy, lacking both the stimulus and the restraint of private enterprise, the effect of which must be repressive. Mr. Davies considers four arguments in favor of municipalization: (1) cheap money; (2) community entitled to profit of communal service; (3) sordid motives of private enterprise, and (4) private monopolies objectionable — and finds them not convincing. As over against those arguments, he asserts that governments will not and ought not to take risks, they cannot invent and therefore municipal enterprise tends to stagnation.

It is when he comes to the consideration of the monopoly phase of these public service industries that Mr. Davies gives to his opponents their best opportunity for attack. He says:

That such concerns are bound to become monopolies in the hands of the corporation [the municipality] may be admitted, for the whole power and authority of that body is used to defend them as such, and to prevent anyone else conducting a competing trade, which, but for the corporation, they would be entitled to do, but to say that they are monopolies when they are in private hands is an abuse of the term. They are only monopolies so long as by reason or their efficient service, or of the apathy of the community, the public do not choose to make the effort necessary to establish a rival undertaking.

If Mr. Davies' contention that public service industries may properly be considered competitive industries, is accepted, the conclusion urged by him that they should be left to private hands follows naturally enough. But the basal contention cannot be accepted. American cities have been proceeding on the theory put forth by Mr. Davies, and with very sorry results, for the most part. The fact is that the street car business, the telephone business, the gas business, the electric light business, and similar industries requiring for their prosecution franchises for the use of public highways, are, in the nature of things, bound to develop into monopolies. Not only that, but they should be monopolies, and it will be better for all concerned when they are treated as such. A concern enjoying monopoly privileges can furnish much better and cheaper service than several competing concerns. Progressive municipalities the world over are beginning to recognize that fact and to act accordingly, whether their policy be to operate such industries themselves or to entrust the management to private hands.



Granted that these industries should be monopolies, and considering that special franchises or licenses are necessary in order to enable private individuals to engage in the business at all, the question presented as between a public monopoly and a private monopoly under strict public control is simply one of results. No fundamental principles, either of economics or government, can rightly be appealed to as decisive in favor of one course as against the other. That course is best which experience and trial shall show to be productive of the most efficient service and the lowest rates to consumers, and which interferes least with the other activities of the government and the people. Naturally local and special conditions must be an important and probably the determining factor in each specific instance. Mr. Davies gives his case away, in so far as he attempts to defend his position upon grounds of fundamental principles of economics and government, by admitting the desirability of municipalization of the supply of water, "which, as a matter of common necessity, and one connected with vital questions of public health, may well be entrusted to the management of the civic officers, more especially as it does not involve any manufacturing risks, and cannot possibly be replaced by another article." If the special reasons advanced are sufficient justification for municipalization of water works, kindred special reasons may be advanced for the municipalization of lighting and transportation systems; then the conditions are favorable to that policy.

Mr. Davies is not fortunate when he draws on America for illustration. He says :

It would be wrong to overlook the serious state of the municipal institutions of America, arising, as competent advisers tell us, from the unlimited enlargement of the functions of the government. The consequence is that public employment is excessively multiplied and the municipal debts have risen to colossal dimensions. The affairs of the cities are left to professional politicians, and are conducted in such a nauseous atmosphere of class corruption and party trickery, that the better class decline to have anything to do with them. A distrust of the servants and representatives of the people is everywhere manifest.

The authority cited in support of this statement is Lecky, *Democracy and Liberty*, Vol. I. pp. 80-86. As a matter of fact, Mr. Davies has misinterpreted his authority. Mr. Lecky, in the pages cited, is speaking of the evils of the spoils system as it exists in America, but he does not even hint at the extension of municipal function in the

direction assumed by Mr. Davies. The truth is that American cities have done comparatively little in the way of management of industries, but have usually left such matters to private corporations, and only too frequently with most scandalous results. Mr. John Burns, M. P., who took part in the discussion of Mr. Davies' paper, showed a better understanding of American conditions, when he said the maladministration of American cities was due in an important degree to the influence of private enterprise in search of special privileges for the management of these public service industries.

Mr. Davies presents charts showing the increase of rates and debt for the past twenty years. The debt increase for cities is striking, and much more than half is for what Mr. Davies terms trading purposes. The charts are deficient, however, in that they do not show what assets are possessed by the cities as an offset to this indebtedness. In other words, the charts fail to throw light on the real question at issue, which is, have the expenditures which this debt represents been profitable ones, and is the public warranted in making more of the same kind?

The paper of Mr. Davies, together with the discussion thereof, is interesting but not highly profitable, unless, as was suggested, it should lead to a parliamentary inquiry covering the entire subject. The need for literature upon the subject of municipalization is not for statements of *a priori* arguments for one side or the other, but for light upon the practical workings and possibilities of public as opposed to private management of these industries under monopoly conditions. The field is one calling for careful research and examination of conditions as they exist, and the presentation of the results of investigation in such manner as to warrant the drawing of inferences applicable to various sets of conditions.

GEORGE CUSHING SIKES.

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*Economic Aspects of the Liquor Problem.* By JOHN KOREN. An investigation made for the Committee of Fifty under the direction of HENRY W. FARNAM, secretary of the Economic Sub-committee. Boston: Houghton, Mifflin & Co., 1899. 12mo. pp. x + 240 + 87.

THIS is the second volume in the series of official publications of the Committee of Fifty, the first having appeared in 1897, bearing the title, *The Liquor Problem in its Legislative Aspects*; while other volumes on other aspects of the problem are promised. The object

of the Committee of Fifty in making these investigations is to secure and to discuss impartially a body of facts relating to the liquor problem "which will serve as a basis for intelligent public and private action" (p. 7). In doing this work the committee has taken a most important step toward a correct understanding of what the problem really is. Much that has been said in years past on the subject of intemperance in this country has been idle, and much of the energy spent has been fruitless, because the situation was not understood. The first essential step in any real reform is made by ascertaining what the facts and conditions are which must be dealt with.

The present volume, while it deals with the economic aspects of the liquor problem, does not attempt to discuss every phase of the problem which might be classed under that head. The *Twelfth Annual Report of the Federal Department of Labor* (1897), which also bears the title, *Economic Aspects of the Liquor Problem*, discusses fully the important subjects of the production and consumption of liquor, together with that of the revenues derived from the traffic. The Economic Sub-committee of the Committee of Fifty, planning with the Department of Labor so that the two investigations might supplement each other, discusses in the present volume the *effect* of the consumption of liquor as related to poverty, pauperism, and crime.

A discussion of these phases of the problem constitutes the chief chapters of the book and represents a great amount of careful work and wide research, the sources of information embracing the records of thirty-three charity organization societies, eleven children's aid societies, sixty almshouses, and seventeen prisons and reformatories scattered throughout twelve states. In respect to poverty, it was found that about 25 per cent. of the cases could be traced directly or indirectly to the use of liquor. Of the cases of poverty found in the almshouses the use of liquor was found to be responsible for some 37 per cent.; while in the cases of the destitution of children not less than 45 per cent. was found to be due to the liquor habit, either of parents, guardians, or others (pp. 21, 22). These percentages are considerably lower than has heretofore been generally supposed; and what is true in respect to poverty and pauperism is also true of the relation of liquor to crime. While 50 per cent. of the crimes committed by the 13,402 convicts whose cases were examined were due to intemperance, intemperance was a first cause in only 31 per cent. of the cases, and the sole cause in only 16 per cent. of the cases studied (p. 30).

Following the general discussion as indicated above is a chapter on the effects of liquor among the Negroes, another on the effects among the North American Indians, and a closing chapter on the social aspects of the saloon. The last chapter might at first seem out of place in a volume devoted to the economic aspects of the subject ; and yet there is a very close connection between the two, the object in the present case being to describe the saloon as a distributing agency between the producer and the consumer of alcoholic beverages, and to point out some of the attractions which the saloon-keeper holds out to his customers. The fact is recognized that the saloon supplies, besides drinks, many social wants which are not at present provided for in any other way ; but in praising these negative virtues the fact is almost lost sight of for the moment that these features are only attractions ; that the paramount object of the saloon-keeper is to sell intoxicating beverages, and that his efforts are not in the direction of a moderate use of liquors, but in the direction of an excessive use of them, in order that he may increase his sales and thereby his profits.

The book is of great value. The spirit which pervades it is scientific and fair, and where opinion is expressed, it is always conservative. It is, in the opinion of the present writer, by far the best contribution to a scientific understanding of the subjects which it discusses that has yet been published, and is a volume which should be carefully read by everyone desiring to study intelligently the liquor problem.

J. E. GEORGE.

ROXBURY, MASS.

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*Economics and Industrial History for Secondary Schools.* By HENRY W. THURSTON. Chicago: Scott, Foresman & Co., 1899. 12mo. pp. 300.

THE adaptation of any study for school use, especially for elementary or secondary schools, must be a matter of slow growth. For a quarter of a century we have been trying to give young people the elements of economics, first in the colleges, then in the secondary schools and now even in the elementary schools. The results have been far from satisfactory, and one reason for it has been that the subject-matter has not been cast in the proper form for the young beginner ; in other words, suitable text-books have not existed. The books were written either by school teachers who knew little economics or by university economists

who knew little of the pedagogical requirements in a book designed for school use. Now that there are found in some of our secondary schools, teachers who have had thorough training in our best universities, books of a different order are appearing. The subject of this sketch is the third book by a properly qualified writer that has appeared within three years. In three years more the books of ten years ago will be doing little except gather dust and occupy shelf-room.

Mr. Thurston both knows his economics well and has been eminently successful as a high-school teacher; during the present year he has been head of the department of social and economic science in the Chicago Normal School. This book was not written to order, but has gradually developed during five years of teaching combined with university study.

The book is in three parts: (I) A study of industrial life by observation, (II) the industrial history of England and the United States, (III) economic theory. An appendix contains some statistical tables and a list of the authorities cited. The introduction is written by Professor Albion W. Small, of the University of Chicago. Accompanying the book is a teacher's manual of twenty-five pages containing suggestions how the book should be used.

Part I contains the most novel features. The author calls it a "laboratory study of existing economic life." The pupils are required to develop classifications of occupations, of forms of business organization, of the agents in production, of goods for personal consumption, etc., out of their own experience or from observation of the business life about them, with some use of books and those chiefly original materials. This part is divided into nineteen lessons; for each piece of work minute directions are given in the text and in the manual. Every feature of this work, the author says, has "been tested in actual class room experience." This part is a valuable contribution to the pedagogy of economics. While some of the exercises would be impracticable in most places, the plan could still be followed lesson by lesson in any high school; only intelligent direction on the part of the teacher and hearty co-operation on the part of the pupils are necessary to success. An infinite improvement this would be over the dreary memorizing of a text that so often passes for the study of economics. Even teachers who do not use the book as a text will find many of these exercises useful. It is safe to predict that the thirty pages

contained in Part I will have a wide influence for the better on economics as a school study.

Part II includes about half of the volume. It comprises four chapters, one for each of the four stages into which it has become customary to divide the development of manufactures—family, gild, domestic, and factory. The question at once arises whether the development of agriculture, transportation, and the other sides of industrial activity, are wisely crowded into these four divisions. To put the industrial history of America in colonial times all into the chapter on the domestic system is singularly inapt: the author himself states that “almost the whole of such industry (manufacturing) was of the early type called in chapter 1 the Home System of Industry.” On the same page it is stated that the “Gild System of industry had no general development in America,” because “artisans in a particular industry were too few in any locality to give much opportunity for the elaborate gild regulations which had formerly existed in England.” It is better to follow Professor Ashley and to understand by the “Gild System” something more than the supervision of industry by those curious mediæval societies, to consider the little shop, with its group of hand-workers, and not the gilds as the distinguishing characteristic of the system. Terms aside, however, Part II, is well executed. It is by far the fullest and best account of economic history for the use of secondary students that is now in print. The publishers would do well to issue in it a volume by itself, as it will be wanted extensively by teachers will not care to use Parts I and III.

Part III is an attempt to present the principles of economics in eighty-seven pages. This small compass is reached, however, not by condensation in the usual manner of the text-book, but by exclusion. Credit and banking scarcely appear at all; money is dismissed in six pages of comments and questions. Value and marginal utility are carefully elaborated in the opening chapter of twenty-five pages; of the five pages given to rent, a little over four treat of the unearned increment with the history of a quarter acre of land in the heart of Chicago as an illustration; six pages are given to such practical phases of the labor question as trade unions and the eight-hour day; in the four-page discussion of the share of product going to the government, a place is found for Professor Seligman's classification stated in his own words.

<sup>1</sup> P. 122.

Deductive reasoning which occupies so prominent a place in most text-books on economics is in this book reduced to a minimum; even Part III, excepting the chapter on value, is either descriptive or else a running comment on practical economic problems; those who have been trained in economic theory may find little that they are familiar with either of form or substance. It is a radical departure from all its predecessors.

It is not possible to pronounce definitely on the merits of the work. Experience alone can tell whether the infusion into economics of so much sociology and economic history is wise. Should observation of industrial life and the study of industrial history be set apart by themselves, or should they be taken in connection with the theory? Should scientific principles receive scant attention, that more space may be given to practical problems? Are money and banking not suitable subjects for study in an elementary course? These questions can be more profitably discussed after Mr. Thurston's book has been used a year or two. That it will considerably modify the present methods of teaching economics seems probable. That few teachers will care to follow it closely also seems probable. This latter fact Mr. Thurston has foreseen and provided for to some extent by furnishing an abundance of references to aid a teacher in making desired variations.

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*The Elements of Public Finance, Including the Monetary System of the United States.* By WINTHROP MOORE DANIELS, M.A., Professor of Political Economy in Princeton University. New York: Henry Holt & Co., 1899. 12mo. pp. 383.

THERE is room for difference of opinion as to whether public finance can be profitably pursued as an ordinary college study. Hitherto most of the instruction offered in this field by American institutions has been of the university type, and such treatises as have been published have had a rather mature class of students in view. But the undoubted growth of popular interest in questions of financial reform in the last decade has led many of the colleges to include brief courses in the theory and history of finance in the curriculum, and it is the needs of these that Professor Daniels has had in mind in planning the

scope of his manual. The volume is evidently the outgrowth of the author's experience in the class room, and every page gives evidence of the clear insight and vigorous presentation that characterize the text-books of successful teachers. It is a stimulating commentary on current financial theories and an illuminating criticism of current financial methods in the United States. As such it can hardly fail to awaken a lively interest in its subject, both among students and lay readers. It is, moreover, full of good sense admirably expressed—rare virtues, both of them, in the academic literature of economics.

An interesting program for the reform of state and local taxation is sketched by Mr. Daniels which is in substantial agreement with the best recent thought on the subject. The chief evils of our general property tax are two: the first is the unfairness wrought by the taxation of realty for state purposes; the second is the injustice resulting from the futile attempts of local governments to tax personal estate (p. 124). The machinery of state boards of equalization is no cure for the first evil and the machinery of "listing," oaths, or tax inquisitor laws cannot reach the second evil. What, then, is the remedy? It is, in the judgment of the author, the abolition of the state tax on real estate and the local taxes on personal estate—in a phrase, the separation of state from local taxation. He would make realty the chief basis of local finance, and the taxes on corporations and inheritances the chief elements of the state revenues. Tangible personalty, such as farm stock or stock in trade, and mortgages, he would exempt, on the general assumption that processes of shifting will equalize the advantages attaching to different species of property (p. 128). This view seems too optimistic, in view of the great uncertainties and the friction that inevitably attend the process of shifting. This apart, however, the plan offered is commendable.

A. C. M.

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*Landmarks in English Industrial History.* By GEORGE TOWNSEND WARNER, M.A., sometime Fellow of Jesus College, Cambridge. New York: The Macmillan Company, 1899. 12mo. pp. 368.

THIS work is a striking effort to bring together in moderate compass the results of the various researches in the field of English economic history in such a way as to exhibit the salient features of England's industrial and commercial progress in a significant and



orderly sequence. Instead of attempting to force the material into a strictly chronological mold on the one hand, or, on the other, of trying to organize it on a few simple lines, Mr. Warner has taken a middle course, and has chosen what appears to him the chief landmark of each age, and grouped round it the events which led up to it, and the consequences which came from it. Thus we get a series of remarkable chapters describing the chief streams of policy and tendency, and the action of the causes that have made up the economic history of England. In some of these chapters, as, *e. g.*, The Black Death, Elizabeth's Legislation, or The Agrarian Revolution, the treatment is masterly and the most suggestive we know of. The effect of the whole work is greatly enhanced by an attractively lucid style. A cordial reception may safely be predicted for this volume by all teachers of economic history.

A. C. M.

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*The Wheat Problem, Revised, with an answer to various Critics.* By SIR WILLIAM CROOKES, F. R. S. With chapters on the future wheat supply of the United States by C. WOOD DAVIS and JOHN HYDE. New York: G. P. Putnam's Sons, 1900. 12mo. pp. xiii + 272.

A SECONDARY purpose of Sir William Crookes's essay on "The World's Supply of Wheat" apparently is to call attention to his experiments in the fixation of nitrogen. These experiments may well have a grave significance for the future food supply, or at any rate the question of the artificial fixation of nitrogen may come to be a vital question, although there are probably few economists who see the problem of artificial fixation as a sphynx's riddle impending in the immediate future.

The author's argument converges to the conclusion that a general scarcity of food is, at the most, no more than a generation ahead. In this he is ably seconded by Mr. Davis's hearty co-operation and has also the somewhat equivocal support of Mr. Hyde's discussion of the wheat problem. Of Mr. Davis it is of course expected that he should unreservedly throw what weight his word has on the side of Sir William's contention. But Mr. Hyde, as becomes a cautious statistician, is non-committal in any matter of forecast, except where he is on the safe ground of available acreage. Mr. Hyde speaks directly to the point which he has set before him, *viz.*, the wheat supply; and he does not commit

himself to the implication that "the wheat supply" is or comes near being synonymous with "the food supply." He deals with the question as a statistical problem of acreage, and has very little to say on the more important question of yield; for future changes of yield, so far as concerns this country, cannot be discussed with any definite outcome on the basis of present statistics. He is, however, content to leave the question of probable future yields with a simple indication of what has been the course of average yields for twenty years back, neglecting to point out that the situation of the grain market during this period has been such as to discourage all efforts to increase the yields of any of the common grains, and so leaving the misleading suggestion that the course of future yields is to be directly inferred from the yields in the immediate past. But while Mr. Hyde's most telling contribution to the argument for a scarcity is this, probably unintended, misleading implication, Sir William faces the question of yields and disposes of it in one of the most extraordinary passages that has yet been met with in all the curious literature extant on the wheat question. In a reply to criticisms offered by Sir John Lawes and Sir Henry Gilbert he argues (pp. 104-107) that the low yields of America, as compared with those of England, are due to conditions of climate and soil, not to the American farmer's less close economy in the use of land. "American methods are quite as well adapted to the soils and climate as are those of England to the soils and climate of Great Britain." This passage the context compels us to take seriously. The consummate ignorance of the aims and methods of American farming reflected in this statement is assuredly surprising enough in a scientist who has so evidently taken pains to inform himself on other features of the subject. And it is at the same time unfortunate in that it may raise a presumption that other, more substantial portions of the argument proceed on equally fanciful and headlong generalizations. In the face of his incredible dealings with these economic data, it needs all the prestige of Sir William's great name to sustain our faith in what he has to say when he is speaking within the lines of his own science.

Correlated with this assumption, that the yield per acre is necessarily stable, is an equally surprising assumption to the effect that the unit consumption of wheat must go on increasing and so hasten the approach of scarcity. Abundance during the past fifteen years has resulted in an increase of unit consumption, and this increase, it is argued, will go on in the face of a slackening supply so as to cause a

scarcity in the future. That is to say, because we have had abundance and consequent low prices of wheat, resulting in a high unit consumption and a low yield, therefore we must expect that in the future we shall have a high unit consumption and a low yield, resulting in scarcity and high prices. Certain passages in the volume might even be construed to say that we shall presently suffer privation because of the excessive prosperity and efficiency of our industry in the future.

So far as the essay is an argument for impending scarcity it proceeds on the assumption that "other circumstances remain the same," particularly the adverse circumstances. But there appears to be no reason for believing that other things will remain the same in the immediate future, any more consistently than they have done in the past. It may therefore fairly be doubted whether Sir William's draft on the future's bank of misery will be honored, since it is drawn with this proviso.

T. V.

*Die Entstehung des sozialen Problems.* Von ARNOLD FISCHER.  
Rostock i. M.: C. J. E. Volckmann, 1896-1898. 8vo. pp.  
xvi + 781.

THE social problem with which the author is occupied is of course the problem which modern socialism offers to solve. A solution is sought in a "science of civilization," differing from earlier attempts at such a science, particularly in the degree of profundity and exhaustiveness with which the causes of cultural growth and the controlling principles of development are examined and formulated. If once an adequate theory of culture has been established, the author feels, the rest follows as a matter of course, though not necessarily by an easy and unlaborious inference, from the main drift of this theory. The social problem which confronts the present generation is a necessary phenomenon of the present phase of culture; it is a fruit which in the natural course ripens at the present stage of cultural maturity, and at no other stage. If we can find wherein consists the essential character of the growth in cultural maturity, we shall, therefore, have a key to the successive emergence of the problems that arise in the life history of society as well as to their significance for the growth of civilization and to their practical solution.

The degree of maturity attained by human culture at any given phase is a question of the degree of exhaustion of the vitality of the

culture in question. The ultimate ground of the problem characteristic of any given cultural phase is, therefore, the intensity of vital force which expresses itself in this cultural phase. "Zeitprobleme sind daher Gradmesser der Lebenskraft und damit der Höhe des Lebensalters jener Cultur, aus der sie emporstiegen" (p. 3). At the same time. "Ein Zeitproblem ist das Bewusstsein eines Uebels des Gemeinwesens" (p. 5). We have therefore to seek a formulation of the course of civilization "as the resultant of a clearly determined law." And since mankind is but a part of the organic world, human civilization is but the resultant of the same forces which determine the development of species in plant and animal life. Now, the sweeping characteristic of the life process of organisms is a continuous decline in the intensity of the forces engaged. Observed phases of development are therefore expressions of stages in the decline of intensity of the life process. This law holds throughout organic life, and as the course of organic development and of culture proceeds we have, as the result of advancing decrepitude, an advance from a blind but fierce assimilative growth, through instinct, feeling, reflection, to rationality and to pure reason. The latter phase of development, the phase characteristic of senile decay, is now upon us, and our social problem is an expression of the evils peculiar to the social organism at this stage. The working class of the present day is the class of pure reason.

With this clue the author cheerfully constructs his comprehensive theory of cultural growth, and apart from this grotesque resort to analogies and metaphysical entities there appears to be but little of a theoretical kind that is new or characteristic in the volume. The theoretical contribution here offered may be taken as an extreme case of that recourse to mystical interpretation, which any reader of the later German speculations in social and economic theory must be prepared to face. But for all his mysticism, the author shows a wide acquaintance with the data of his subject, and no mean capacity for turning them to account.

T. V.

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*Pamphlets socialistes: Le droit à la paresse; La religion du capital; L'appétit vendu; Pie IX au paradis.* Par PAUL LAFARGUE. Paris: V. Giard & E. Brière, 1900. 12mo. pp. 164.

THESE discourses, reprinted here in collected form from widely separate dates, are held in the light and easy vein characteristic of M.

Lafargue when he aims to be entertaining. The first two are well-known pieces, of a satirical purpose; the two latter are of the same class, though newer and less well known. The whole is excellent in its kind, with an excellence characteristic of the propagandist literature of which it is an exceptionally effective sample. As commonly happens in the case of the socialistic satire from the continent of Europe, the jests are too broad, of too maudlin a complexion to appeal with full effect to English, and particularly to American readers. This is particularly true of the later ones of these pamphlets of M. Lafargue's. The satire is overstrained to such a degree as to defeat its own purpose.

T. V.

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# THE JOURNAL

OF

# POLITICAL ECONOMY

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*JUNE*—1900

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## RECENT MONETARY LEGISLATION.

It has been repeated by the public press, and assumed by the country, chiefly on the basis of reports emanating from Washington, that the act of March 14, 1900, whatever may have been its shortcomings in other directions, has at least firmly established the gold standard in the United States. The belief is generally prevalent that the election of a president pledged to the cause of free silver would no longer be a source of danger to our monetary system, because the gold standard has been placed by the new legislation beyond the reach of executive control; that the mere action of a future Secretary of the Treasury hostile to gold could not cause public or private obligations to be paid in silver; and that nothing could now be done for silver except by new and positive legislation, a contingency, which would be impossible so long as the Senate and the Executive favor gold. Hence we are assured that we may rest free from all danger of the "silver issue," which we hear on all sides is now "dead." On the strength of this belief, political lines are being drawn, and a plan of campaign is being formed. That there has been a subtle game of politics played

with our recent monetary legislation through the influence of the senate is unmistakably clear and is nothing unusual or surprising. But it is not certain that the general public is aware of the exact effect of the provisions of the new law, or informed how little has been done. Indeed, it may be a surprise to many to be told that, as regards the establishment of the gold standard, not only has practically nothing new been introduced into the situation by this bill, but that we have in general no new means of maintaining the standard which we did not have before the act was passed. If there had been possible danger from silver before March 14, 1900, the same danger still exists. Without any desire to be sensational or to create alarm, it is my belief that it is wise to face the facts of this new act as they are. While I do not believe that the gold standard is in any more danger than it was in 1899, I certainly do believe that we are not in any better position in 1900 than we were before.

In speaking of the gold standard as firmly established, one means the obligation to pay gold whenever the word "dollars" is used. As every one knows, the word "coin" allowed an uncertainty as to whether a contract generally payable in "dollars," could be paid in silver dollars (of  $371\frac{1}{4}$  grains pure silver) or in gold dollars (of 23.22 grains pure gold). This uncertainty in regard to United States bonds seriously affected their value, and was one strong reason why new legislation was thought to be necessary to remove all doubt. It may, therefore, be a shock to some trusting people to be told that, in spite of the new law, a silver-loving Secretary of the Treasury could today pay off very large amounts of government obligations with silver dollars. If a free-silver president were to enter the White House in 1901, there would probably be a large amount of obligations which could then be paid in silver.

Even if the standard of payments and prices may now in practice be gold, as regards both government and private debts, it is important to know how permanent this situation is. For simplicity, the matter of government bonds will be discussed

first. How has the act of March 14, 1900, affected the "coin" provision in which national obligations are payable?

The contention which arose soon after the Civil War, that the debt of the United States was payable in paper, was settled in fact by the actual refunding of the whole debt under the act of July 14, 1870, which provided that the bonds issued under this law should be "redeemable in coin of the present standard value." Obviously this phrase referred to the standard coin existing before the act of 1873, and which then included silver dollars (of  $371\frac{1}{4}$  grains pure silver) as well as gold dollars. Of course, silver dollars were worth more than gold dollars in 1870; and, as we all know, both gold and silver coins had been driven from circulation by the depreciated United States notes; but such facts are not to the point. Coin, in our law in 1870, included the silver dollar, whether it was in circulation or not. Hence all the bonds refunded under the act of 1870 were payable at the discretion of the Treasury either in silver or gold dollars.

The act of February 12, 1873 ("the crime of 1873") did not abolish the legal tender value of any of the few silver dollars which might then have been in existence. It simply omitted to provide for the future coinage of silver dollars (sections 15 and 17); and added (section 14):

That the gold coins of the United States shall be a one-dollar piece, which at the standard weight of twenty-five and eight tenths grains, shall be the unit of value, etc.

It will be seen, then, no matter what other considerations may be adduced, that under the law in 1870, "coin" certainly included silver dollars; and that the act of 1873 did not change this situation. And in declaring the gold dollar to be "the unit of value," it did not forbid the use of silver dollars in any payments, public or private. The limitation on the legal tender power in 1874 was the only change introduced at this time.<sup>1</sup>

The subsequent fact of importance is that all bonds of later issue (until the Spanish War Loan of 1898) have been based

<sup>1</sup> The revised statutes of June 22, 1874 inserted a provision (sec. 3586) which limited the legal tender power of all our silver coins to sums not exceeding five dollars.



upon the provisions of the act of July 14, 1870. That is, the existing four-per-cents of 1907 were issued under that act. Also, any bonds put out under the terms of the Resumption Act of January 14, 1875, in order to obtain gold, were "of the same description as those issued by the act of July 14, 1870." Thus the extended twos (of the loan of 1891), five-per-cents of 1894, and the four-per-cents of 1925, are covered by this latter statement. The United States bonds thus stood at the time of the passage of the recent monetary law, all payable in "coin":

4 per cent. bonds, 1907	-	-	-	-	\$ 559,652,300
5 " " " 1904	-	-	-	-	100,000,000
2 " " " 1901 (extended)	-	-	-	-	25,364,500
4 " " " 1925	-	-	-	-	162,315,400
3 " " " 1898	-	-	-	-	198,678,720
					<hr/>
					\$1,046,010,920

The act of March 14, 1900, authorized a partial refunding of the old debt into 2 per cent. bonds, whose principal and interest is made specifically payable in "gold coin of the present standard value." It does not allow the refunding into the new twos of the extended twos of 1891, nor the four-per-cents of 1925—in all a sum of \$187,679,900. Very recently (May 1900) the extended twos have been called in for redemption, so that the bonds of 1925 are the only ones in fact excluded. But it remains clear that a secretary, opposed to the gold standard, might on change of parties pay off at maturity \$162,315,400 of national debt in silver, at his discretion. Nor is that all of it. Of the \$858,331,020 of old debt refundible into the new gold twos, at the time of writing (June 1, 1900), only about 280 million dollars have been offered for exchange. How rapidly, or how thoroughly, conversion will go on, no one can now prophesy. However, there are so far unconverted bonds to the amount of 578 million dollars which, if not refunded, could be paid off at maturity in silver. In other words, not only the \$162,315,400 of 4 per cent. bonds of 1925, but any of the other descriptions of bonds which may not be refunded into new twos, would be payable in silver

(in all, taking the impossible supposition that refunding should cease entirely from now on, to 740 million dollars). To the extent that conversion goes on, this gross sum will, of course, be reduced.

With the above situation it must be kept in mind that the act of March 14, 1900, specifically enacts (sec. 3):

That nothing contained in this act shall be construed to affect the legal tender quality, as now provided by law, of the silver dollar, or of any other money coined or issued by the United States.

That is, the act of February 28, 1878, which made the silver dollars "a legal tender, at their nominal value, for all debts, public and private, except where otherwise expressly stipulated in the contract," is still in operation. The outcome is a visible attempt to sit on two stools: in one word to declare that the gold dollar shall be the standard unit of value, and in another to declare that the silver dollar shall remain an unlimited legal tender. The political legerdemain in this depends upon the inability of the public to separate the assignment of legal tender quality to the standard (in which prices and contracts are expressed) from the assignment of it to a token money (which should be redeemable in the standard money). Because the standard money is made legal tender, it does not follow that a medium of exchange should have that quality (such, for example, as checks and drafts).

The dodging of the standard issue in regard to government obligations cannot be excused on the ground of inadvertence. The House Bill (sec. 2) reads:

That all interest-bearing obligations of the United States for the payment of money, now existing or hereafter to be entered into, . . . shall be deemed and held to be payable in the gold coin of the United States as defined in section 1 of this act.

These words did not appear in the senate bill, and were excluded from the conference bill. In short, for political reasons, the senate leaders advisedly chose to change the currency measure in such a way that it could still be said that a large part of our national obligations were payable in silver;

while scheming for votes in the East on the ground of having established the gold standard, it would be possible to ask for votes in the Rocky Mountain states on the ground of having preserved the right to pay a large part of the bonds in silver. It must be said, therefore, that the new legislation establishes the payment in gold of only a part of our government obligations (and also that this amount depends upon how far they are refunded into the new twos).

The consideration, however, of most importance to the business public is the certainty of the standard in ordinary private contracts drawn in "dollars," without a specific agreement to pay gold. Naturally, it may be said that the national bonds could not be paid in silver any way until the time of maturity, and that that fear need not give much reason for distrust. But as to private debts, falling due every day, every one realizes it to be a matter of present concern. Since the unlimited legal tender power of the silver dollar is retained for all obligations in which gold is not expressly stipulated, it is clear that all private contracts thus generally drawn could be liquidated in silver. The gold standard of payments, therefore, is not made obligatory for private debts. The new law manifestly has not established the gold standard for the ordinary transactions of daily business life. If a lender of money wishes to secure repayment in gold, he must, today, as well as before this act was passed, expressly stipulate for gold in the contract. The act of March 14, 1900, does not give us any new protection in this regard. Hence we ought to give up the fiction that the new law has "established the gold standard."

Since silver dollars can be paid for public and private debts in nearly as many cases as before the act of 1900, the question as to the permanence of the gold standard is, then, to be found in the provisions for maintaining silver at par with gold. Certainly, a reader might say, so long as silver is kept in value equal to gold, no one would object to being paid in silver; and reference

might be made to the fact that the new law (sec. 1) not only declared the gold dollar to be "the standard unit of value," but also that "all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard, and it shall be the duty of the Secretary of the Treasury to maintain such parity" To the innocent reader this may look like a veritable establishment of the parity of silver with gold. But it adds nothing that did not exist in the law before (in the acts of July 14, 1890, and November 1, 1893).<sup>1</sup> It pretends to establish parity by command, but it gives absolutely nothing with which to maintain parity. Suppose that Congress had ordained that the navy should have had all the old powder exchanged for smokeless powder, and that it should have made it the duty of the Secretary of the Navy to make such exchange, and had provided no appropriation for this purpose, nor allowed any new machinery for carrying out the plan beyond what existed before. Should we not regard this as something more than trickery? Certainly: it would be an insult to the intelligence of the public. In the new monetary law, we have actually no means of maintaining silver dollars at par with gold which did not exist before the act was passed. Here again, the jugglery of the senate leaders showed itself. The House Bill ran (sec. 4):

<sup>1</sup> Act of July 14, 1890 (sec. 2): "That upon demand of the holder of any of the Treasury notes herein provided for, the Secretary of the Treasury shall, under such regulations as he may prescribe, redeem such notes in gold or silver coin, at his discretion, it being the established policy of the United States to maintain the two metals on a parity with each other upon the present ratio, or such ratio as may be provided by law."

Act of November 1, 1893: "And it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money, and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement, or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals, and the equal power of every dollar at all times in the markets and in the payment of debts. And it is hereby further declared that the effort of the government should be steadily directed to the establishment of such a safe system of bimetalism as will maintain at all times the equal power of every dollar coined or issued by the United States, in the markets and in the payment of debts."

The Secretary of the Treasury is authorized and required to use said [gold] reserve in maintaining at all times the parity and equal value of *every dollar issued or coined* by the government; and if at any time the Secretary of the Treasury deems it necessary in order to maintain the parity and equal value of *all the money* of the United States, he may at his discretion exchange gold coin for any other money issued or coined by the United States.

In short, the house bill set out to provide a gold reserve to be used for the maintenance of the parity of all kinds of our money; but the senate overruled this plan, and limited the use of the gold reserve solely to United States notes and treasury notes of 1890. That is, if the treasury should find difficulty in keeping about 579 million of silver dollars at par with gold, he could not use the new gold reserve (for the replenishment of which provision was made by selling bonds). All the regulations of the reserve apply to the two forms of paper (amounting to about 426 million dollars), while about 575 million dollars of silver, which carries a seignorage of over 50 per cent. is left without any direct means of redemption into gold, as a means of keeping the parity. I have said that the permanence of the gold standard depends upon the provisions of the new law as to maintaining the parity between gold and silver; but we now see that no new means whatever have been given to accomplish this end. Such methods of keeping silver at parity with gold which existed before the act of March 14, 1900 are still the only means we now have of assuring the continuance of the gold standard. The new law has not given us any new methods of redemption.<sup>1</sup> Here we have had an exhibition of gross cowardice on the part of Congress.

In one respect, however, the new legislation has bettered the chances of keeping our silver at par with gold. By the withdrawal of United States notes and national bank notes (except one third of the new circulation) in denominations below \$10, and by reducing the large silver certificates to small denominations to take their place, an additional use is created for the

<sup>1</sup> How silver has been, in fact, kept at par with gold in the past by an indirect system of redemption through the payment of customs, and by the complementary offer of gold to all creditors of the treasury, I need not go into here. Cf. my *History of Bimetallism in the United States*, 4th ed., pp. 253-255.

silver money, and therefore there will be less reason for its redundancy and consequently for its presentation at the treasury in payment of customs in a process of indirect redemption. By increasing the probability of keeping silver permanently in circulation for purposes of change, it becomes less dangerous.

But this gain is fully offset by the provisions of the act which affect the silver bullion behind the treasury notes of 1890, and which will increase the quantity of silver dollars to be kept at a parity. Here we have another sop to Cerberus. From a sane point of view it is not much more creditable than the measure to coin the seignorage which was defeated some years ago. Under the act of July 14, 1890, 168,674,682.53 ounces of fine silver were bought by the issue of \$155,931,002.25 of treasury notes. The average price paid per ounce for this bullion was \$0.9244; and as the price is now about one third less, the value behind the notes has become one third less. But if this bullion were coined into silver dollars (at the rate of 371¼ grains each), the 168,674,682.53 fine ounces would yield about 218 million silver dollars. Then, instead of \$155,931,002.25 treasury notes to look after, there would have been a vastly larger bulk of silver dollars to be added to those already coined under the act of 1878. The disposition of this bullion is a fair test of the animus of the new legislation. One bit of help exists in the permission to use enough of the bullion to increase the subsidiary coinage to 100 million dollars; and since the amount outstanding March 1, 1900, was \$80,101,151, it appears that an increase of nominal face value to the sum of about 20 million dollars (or about 14 million fine ounces) is possible. With this exception the act emphasizes the policy of coining the rest of the bullion into dollar pieces and retiring the treasury notes. It is doubtless generally understood how the terms of the act of July 14, 1890 would have brought about a gradual extinction of treasury notes of 1890. This process was established in the words: (sec. 2.)

*No greater or less* amount of such notes shall be outstanding at any time than the cost of the silver bullion and the standard silver dollars coined therefrom, then held in the treasury purchased by such notes.

Hence treasury notes, when redeemed by gold would be reissued in order to keep the amount equal to the bullion plus the silver dollars held; but when redeemed by silver, the treasury notes would be canceled in order to keep the amount outstanding no greater nor less than the bullion plus the diminished number of silver dollars held. The released silver dollars, if returned in any way to the treasury, could then become the basis of additional silver certificates (but never of treasury notes). This explains why the treasury notes were gradually being reduced in volume, coincident with an increase of silver dollars and silver certificates.

The act of June 13, 1898 (the Spanish War Loan and Revenue Act), stimulated this process by the following requirement (sec. 34):

That the Secretary of the Treasury is hereby authorized and directed to coin into standard silver dollars as rapidly as the public interests may require, to an amount, however, of not less than one and one half millions of dollars in each month, all of the silver bullion now in the treasury purchased in accordance with the provisions of the act approved July 14, 1890 . . . and said dollars, when so coined, shall be used and applied in the manner and for the purposes named in said act.

Then the act of March 14, 1900, specified that as fast as silver dollars were coined under the foregoing laws, the secretary should (sec. 5):

Retire and cancel an equal amount of treasury notes whenever received into the treasury, either by exchange in accordance with the provisions of this act or in the ordinary course of business, and upon the cancellation of treasury notes silver certificates shall be issued against the silver dollars so coined.

In this way the new law has brought about the cancellation of treasury notes without waiting for the former process of redemption by silver, thus hastening the conversion of treasury notes into silver certificates. The only advantage to be gained from this action is the final disappearance of one of the too many kinds of money which make up our circulation.

When the new law came into force there were only \$86,776,000 treasury notes outstanding, supported by bullion costing \$77,402,692, plus \$9,373,308 silver dollars. The number of

ounces of fine silver uncoined at that date was about 85,550,000. Consequently, instead of 155 million dollars in treasury notes, we shall have about 200 million in silver dollars when conversion has been completed, or an increase of not less than 45 million dollars. This increased volume of silver dollars will raise the total issue (including the 378 million dollars coined under the act of 1878) to about 578 million dollars. For the maintenance of this vast sum at parity with gold, when each silver dollar is actually worth only about 47 cents, there is absolutely no method of direct redemption in gold. And the act of March 14, 1900, gives no new provisions whatever to accomplish this end, or to support its windy and virtuous order to the secretary to maintain the parity. Congress might as well have ordered the secretary to see that every citizen of the United States should have blue eyes, so far as any new power was given him to carry out the purpose.

It will be noticed that all the machinery for a gold reserve, its increase to 150 million dollars, its replenishment from sales of bonds, etc., has to do solely with protection to the United States notes and treasury notes of 1890. Hence, when the latter have ceased to exist, the gold reserve will remain only for the government paper, with nothing in reserve for our token silver. The ominous feature of this arrangement is the evident intention to regard the United States notes as a permanent part of the circulation. No suggestion whatever is made as to the future retirement of any portion of this form of our money. That, it is clear, must be reserved for future reforms.

But although the new measure has given us no firmer hold on the gold standard, and has done nothing to remove the United States notes, it has, indeed, secured to us a reform which, in possibilities of safety in the future, wholly outweighs any other feature of the act. One who has not watched carefully the origins of our paper money delusions will fail to realize how dangerous was the confusion in the minds of our legislators in the past between the monetary and the fiscal functions of the



state. It was this confusion which, in 1862, led to borrowing in the form of demand obligations to be used as money; a depreciation of the standard of prices; the destruction of our credit in the loan market; the appearance of speculation and unsettled business conditions—and all the evils of a fluctuating currency. Since the resumption of specie payments in 1879, the gold reserve has been a part of the general fund applicable to fiscal purposes in cases of deficit, as well as to the redemption of our paper money. For this reason we got into serious trouble when deficits used up the gold reserves, because fiscal operations took immediate effect on the character of our standard of prices and contracts. No mere question of revenue and expenditure of the general treasury should ever be permitted to have such an influence on our standard that business could be seriously crippled thereby. It is such an anomalous situation as this which has been made impossible by the distinct separation of the funds used for reserves behind the government paper from other cash in the hands of the state. This appears in the new form of treasury statements. In the years to come nothing we have accomplished will do more than this one provision to clarify the public mind as to the true status of our paper money, and to save us from stupid blundering. While this part of the act has excited little comment in the press, it is of first importance as a piece of positive legislation. This one measure would alone have made the present act prominent in the history of monetary legislation since the Civil War. It was just such a measure as this which formed the pivotal part of the recent Russian monetary reforms.

The regulations by which the gold reserve for government paper is to be maintained, and the details of redemption, are doubtless clumsy, and drawn in such a way as to escape political attack; but there is little reason to believe that they will not work out successfully in practice. Certainly the redeemability of the United States notes and the treasury notes of 1890 is provided for beyond peradventure, in the permission to sell bonds to protect the gold reserve. But the separation of the Issue and

Redemption Departments from the general treasury funds makes still more clear than ever that no gold in the former can ever be used in the indirect or direct redemption of silver dollars ; and that the character of the silver circulation depends wholly upon the composition of the free treasury balance. If gold does not readily come in for revenue, or if redundant silver should be paid in instead, the free balance would more quickly than of old indicate the difficulty of maintaining our large silver circulation at a parity with gold.

The sections of the law relating to banking may be dismissed in a few words, because the changes proposed are unimportant. The reduction in the tax on circulation, and the increase in the amount of notes issued by banks to 100 per cent. of the value of the bonds, will have no serious influence in expanding the circulation.

The refunding provisions, however, are of an important character. They are important because, in order to serve a political end, one of the generally accepted principles of finance has been violated. There can be no doubt that the extension of the term of the new bonds to thirty years had only political considerations behind it. It is almost inconceivable in an intelligent community that a state should put its bonds in a form where they cannot be paid off within a reasonable period. After the present extended twos are paid off (a process now going on), and should all the old bonds be refunded into the new loan, our national debt could not be reduced (except by purchase in the open market) before the 4s of 1925 mature. So flagrant an abuse of sound finance can be explained only on the supposition that a supply of national bonds would be assured for a generation to come in quantity sufficient for the security of the national bank circulation. This was the adroit move by which the senate leaders succeeded in shelving for decades the demand for an elastic bank currency based upon commercial assets. And if the refunding measure released a considerable sum from the treasury in payment of premiums, and caused an enlargement of

the banking circulation, it would be supposed to ease the money market during a presidential year, aid in the "prosperity" argument, and assist in the political purposes of the party in power. In general, it can be said that the new measure does not add anything of value to the machinery by which the banks are enabled to adjust the supply of currency automatically to the needs of the public. Many small banks, and some large ones, will no doubt be established, or come into the system, but after that increase, the rigidity of the old system will remain with all its well-known characteristics.

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## THE PLACE OF THE SERVICE TAX IN MODERN FINANCE.

FOR purposes of financial investigation the state is generally treated as a species of organism possessed of certain wants the satisfaction of which is the chief concern of the science of public finance. According to Professor Henry C. Adams these "*wants are reducible to a demand for money.*"<sup>1</sup> It is not intended here to examine in detail the reasoning behind this conclusion but rather to show by independent treatment both its unsatisfactoriness from the standpoint of the science of finance and the economic mistake of allowing it to remain crystallized in an accepted doctrine. For Professor Adams, in the phrase quoted, only puts into concise formula the spirit of his most distinguished contemporaries on this subject. Indeed the "money" view is so far accepted that it scarcely evokes discussion.

The following is suggested as an improvement upon the statement of Professor Adams: *Public wants are reducible to a demand for services; which services may be obtained, either by direct impost upon the strength and intelligence of the public, or through the mediumship of goods or of money.* The social organism has no animal longings after material things; its hunger and its thirst are after such services as soldiers and judges and juries and legislators and sheriffs and clerks can render. It may obtain any or all of such services either, directly, by compelling citizens or others within reach of the taxing power to render them gratuitously; or it may obtain them by compelling the services but at the same time providing a commissary or an arbitrary money wage; or the services may be rendered entirely voluntarily in consideration of stated wages and salaries, the necessary funds being derived by a money tax: or the wants of the state may be satisfied through any combination of these methods.

<sup>1</sup> *Finance* (New York, 1898), p. 14.

The services, goods, or money required may be obtained, it should be added, either through voluntary gift or through compulsion. Both the voluntary and involuntary methods have always been and are still in vogue and while the latter method is and must be, as Professor Adams well shows, of relatively increasing importance, the voluntary method is still and is always likely to be of sufficient extent and importance to merit attention. These two methods are mentioned here because the service tax cannot be clearly understood without some consideration being given to voluntary or "volunteer" services to the state.

From the side of standard definitions it would scarcely be necessary to call attention to the "tax nature" of compulsory services rendered to the state. This nature is not made perfectly clear, however, in the text of Bastable's definition in which a tax is described as "*a compulsory contribution of the wealth of a person or body of persons for the service of public powers,*" unless we accept the view that services are goods and constitute wealth. But there is left no room to doubt the construction intended by the author by what follows by way of illustration: "Military service or forced labor for, say, repairing roads (corvees) is a tax quite as much as payment of money or goods."<sup>1</sup>

Professor Ely's definition of a tax is more satisfactory on this point in that it leaves no need for the construction of any doubtful terms. He defines a tax as a "*one-sided transfer of economic goods or services demanded of the citizens and occasionally of those not citizens,*" etc. And in referring specifically to service taxes Professor Ely says: "Taxes for certain purposes are still paid in labor in many of our states. These are chiefly taxes for construction, maintenance and improvement of roads in country districts." And in noting the general abandonment of the principle in cities he mentions the interesting exception of Atlanta, Georgia, where "those who fail or refuse to pay this or other taxes in money are obliged to work on the streets at the rate of thirty-five cents a day until their taxes are thus paid."<sup>2</sup>

<sup>1</sup> *Public Finance* (New York and London, 1892), p. 243.

<sup>2</sup> *Taxation in American States and Cities* (New York, 1888); p. 7.

But while compulsory service is recognized as a tax by prominent writers in their definitions and elsewhere, it is scarcely included in their general treatment of the subject of taxation, save in the way of incidental reference as a survival in culture and mostly to be deplored. Professor Adams, after condemning the road tax, and giving a qualified approval to the military tax, and commending the jury service tax, concludes that "with the few exceptions named, and others allied to these in principle, the demand of the state for labor and service, is like the demand for land, reducible to a money demand." . . . . And that what the state wants for the satisfactory performance of its duties is control over an adequate money supply."<sup>1</sup>

It is here again submitted, subject to later demonstration, that it were better both in the interest of clear thinking and in the interest of wholesome doctrines of finance for the future guidance of statesmen, to state the real things that the government wants, viz., services, and not the medium by which they are most often secured. This view is here held because, first, the direct method of satisfying public wants has never been by any means wholly abandoned, and, second, because the present tendencies in industrial development seem to offer opportunities for a renaissance of the old system adapted to modern institutions.

A recognition of the principle of the service tax is justified both on the ground of its present application and of what is here held to be the fact that it forms the parent stock from which other forms of taxes are offshoots. Professor Seligman, and, in fact most academic writers, trace our system of modern taxes to various voluntary and *quasi* voluntary contributions for the support of the sovereign.<sup>2</sup> A respectful demurrer is here taken to this view and to the idea that the history of taxation can be traced or illustrated by etymology. The terms implying gifts, aids, etc., do not seem to relate to the ancestors of our present taxes, but only to occasional customs, which may indeed have prepared the way for a transition from a

<sup>1</sup> *Finance*, pp. 18-20.

<sup>2</sup> *Essays on Taxation* (N. Y., 1895), p. 6.

service tax to a tax on goods and money, but they were not the things themselves that were metamorphosed into our modern taxes. To be sure we think of the mediæval sovereign as self-supporting and as receiving only occasional presents and aids from his subjects. And we think of the ancient state, particularly Imperial Rome, as living chiefly upon the spoils of war and the tribute exacted from conquered peoples. In Rome the regular tax upon citizens seemed to have been an ancient custom, a recurrence of which was greatly to be deplored, and one cause of its odium was, doubtless, a servile association. Regular payment to the state was deemed fit for the people of a conquered and exploited province, but not for free citizens. What in fact most nearly responded to our taxes was a payment for the privilege of occupying land, and to pay this rent or tax was to be a subject, and to receive it was to be a lord or sovereign. But in the ancient state society had progressed to that point where the sovereign was not an individual, but a collectivism, or we may say the proprietorship had become collectivistic. If historical data were available we could probably trace the ancient tax back to the service tax which in time was commuted into a money payment, but as to our modern taxes there is no difficulty in this regard.

The roots of the modern systems are to be found more in tribute out of the fruits of the land and in services rendered to the lord of the soil than in occasional gifts of money on the part of free citizens. In England under feudalism the more privileged subjects, the knights, rendered two classes of service which might be denominated taxes and aids. The taxes were paid in the most direct manner. According to Blackstone,

The first, most universal, and esteemed the most honorable species of tenure, was by knight-service, called in Latin *servitium militare*; and in the law French, *chivalry*, or *service de chevalier*. . . . To make a tenure by knight-service a determinate quantity of land was necessary, which was called a knight's fee, or *feodum militare* the measure of which, in 3 Edward I., was estimated at twelve ploughlands, and its value, though it varied with the times, in the reign of Edward I. and Edward II. was stated at £20 per annum, and he who held this proportion of land (or a whole fee) by knight-service

was bound to attend his lord to the wars for forty days in every year if called upon ; which attendance was his *reditus* or return, his rent or service for the land he claimed to hold. If he held only half a knight's fee, he was only bound to attend twenty days, and so on in proportion.<sup>1</sup>

On the other hand the aids and benevolences were certain occasional gifts, largely pecuniary, made from the tenant to the lord which tended to become perquisites and finally fixed obligations, and to prepare the way for the commutation of the personal service.

Tenure by knight-service is further described as one "by which the greatest part of the lands in this kingdom were holden, and that principally of the king, *in capite*, till the middle of the last century ; and which was created, as Sir Edward Coke expressly testifies, for a military purpose, viz., for defense of the realm by the king's own principal subjects, which was judged to be much better than to trust to hirelings or foreigners . . . but the personal attendance in knight-service growing troublesome and inconvenient in many respects, the tenants found means of compounding for it, first, by sending others in their stead, and in process of time making a pecuniary satisfaction to the lords in lieu of it. This pecuniary satisfaction at last came to be levied by assessments, at so much for every knight's fee, and therefore this kind of tenure was called *scutagium* in Latin, or *servitium scuti*, scutum being then a well-known denomination for money ; and in like manner it was called in our Norman French *escuage*, being a pecuniary instead of a military service."<sup>2</sup>

The scutages began under Henry II., and the custom soon became universal. Its arbitrary application led to the *Magna Charta* of King John, which promised that in the future scutages would only be imposed upon the consent of parliament. Thus, as Blackstone says, scutages "were indeed the groundwork of all succeeding subsidies, and the land tax of later times."

McCulloch also recognizes the service origin of taxation when he says : "The scheme of taxation now in force in modern

<sup>1</sup> *Commentaries*, book ii. ch. v.

<sup>2</sup> *Commentaries*, book ii. ch. v.



Europe had its origin in the decline of the feudal system. According to the principles of that system lands were held as fiefs of the crown, on condition of the possessors performing certain stipulated services, of which the obligation to support the sovereign when he took the field, with a body of retainers, armed and maintained at their own expense, was by far the most important.<sup>1</sup>

This leads us to recall that the state is an evolution out of private property. The lord was originally a proprietor, and the dues rendered were his recognized personal right. To own land was to be, in some degree, a sovereign, and the support of sovereignty, even in low degree in those days, required a rendering of both goods and services on the part of the tenants. The rendering of services may be in a peculiar way the progenitor of our modern system in that it is the part of the dues which suggests a common cause, the armed support of the sovereign or proprietor being as essential to the well-being of the tenant as it was to the secure dignity and power of the lord. During the stages of the evolution out of feudalism the sense of common cause and the sense of private right must have been mingled in varying proportions, the one tending to rise into democracy and the other preserving a ballast of fealty. The fealty is transferred to the community as the person of the lord is obscured by the impersonal "common good." Through these transition stages, however, the right to revert to the old service economy has never been abandoned, and it has been essential to the expanding size of the state that this element of strength be retained, either in active or in latent form.

The fundamental importance of retaining the principle of the service tax may be seen in the military needs of the state. To be sure the general military and constabulary needs of the community are now largely met out of tax receipts. These services in several countries, and particularly in those countries which have made the greatest strides in industrial progress, are procured upon a contractual basis, *i. e.*, the pay offered is

<sup>1</sup> *McCulloch on Taxation* (1845), p. 3.

intended to attract a sufficient number of officers and men. But the crucial test of the military needs comes in the time of a national crisis, when this method is inadequate. At such times a chief resource is found in the enthusiasm of the people, but this very enthusiasm may often, if not usually, rest upon a recognition of the right of the state to the service of the citizens in its hour of need. When the citizen realizes his obligation he will oftentimes not wait to be called, but be beforehand in the field. The generally accepted maxim "my country right or wrong" is an unconscious deduction from the principle of public obligation. This maxim seems, from a surface view, absurd, but when one follows it down to its roots it clearly rests upon one of the most wholesome of principles. In time of peace the citizen may analyze and criticise the quality and the spirit of his national institutions, and he ought to do so ; but in time of war, when the nation is defending its peace and dignity, or its integrity, or is engaged in the prosecution of any sort of a hostile program of international import, it is all essential that its constituent units be in intense sympathy and rhythm. That is not saying that it is always best for the good of a nation that it be successful in war. On the contrary it may often reap the most glorious victories through defeat. But the chastisement should come from without and should not come from rebellion or lukewarmness from within. The perfect health of the nation requires that there be no temporizing with the doctrine of the unqualified right of the government to the service of any or all of its citizens.

The volunteer army is a recognition of this right, and it will be found, if carefully examined, to be due in large part to the existence of this political dogma. Take for example our war with Mexico. In that war the volunteer army was largely recruited from the North, and by citizens who had no sympathy with slavery or with the program of its promoters. Or take the war of the rebellion, and it is clear that the Federal troops were in large part recruited, before the application of the draft, by persons with no convictions upon the slavery question at all,

and indeed with no knowledge of the subtleties involved in the doctrine of state sovereignty about which our statesmen so much contended in the first half of the century, nor indeed as to the sense of the Federal constitution upon that point. The late war with Spain and the present war with the Philippines may also be studied with profit from this point of view. The volunteer army was in these cases composed largely of young men, preferably of unmarried men. These soldiers were not, it is safe to say, as a body, profoundly impressed with the righteousness of the cause, with the oppressions of Spain in the one case, nor with our "manifest destiny" on the other. It may be that a majority of the whole body of soldiers had no intelligent understanding of what the country was fighting for, but everyone knew that he was fighting for the country—not for its defense or protection, but in simple obedience to its commands. That is, when the bargain method of procuring services fails to meet the needs, a call to arms is addressed to a certain class of citizens. Couched in the language of a request, it has the force of a command to those members of the class addressed, who are thoroughly grounded in the principle here under discussion, and they must obey it if they have no plea in avoidance to present to their consciences. If this general request does not elicit a sufficient response the government changes it into the form of a command, and all citizens falling within the class addressed who do not present themselves for examination and enrollment are sought out and forcibly impressed into the service.

The right to impose a service tax must always reside at this vital point. The government in its extremest need resorts to the direct method of satisfying its wants, and if the exigencies do not often arise to compel a resort to this expedient it is nevertheless vitally essential that the principle be preserved.

There is another application of the service tax in the interest of public order of more frequent use, *i. e.*, the *posse comitatus*. This is an essential part of an efficient shrievalty or constabulary. It is founded upon the principle that every citizen is

bound not only to conform his own conduct to accepted canons of public order, but to use his might in compelling others so to do. The common law declares it to be the right of any citizen to arrest a lawbreaker by hue and cry when he discovers him in the commission of an unlawful act. In fact, this right is nothing more nor less than a duty which may be enforced when an authorized leader is present. A disturbance is apt to break out at any time, in any quarter, with which the regular constabulary on the ground is not able successfully to cope; and the right of the officer of the state to compel the bystanders to come to his aid is at once a great economy of public money and a wholesome educator in the sense of public responsibility.

Passing now from the consideration of the satisfaction of the more imperative military needs of the state by the direct method, to examine its application in ordinary times, we find some interesting survivals. And here it must be observed that exigencies were in former times almost omnipresent. The possession of property was often secured through a successful war, and the military favorite was allowed the immediate supervision and the major part of the usufruct, provided he should render the military service which was so frequently needed. It is interesting to note here that those countries in which real democracy and large-scale industrialism are most advanced were the first to place the militia and constabulary, for ordinary times, upon an economic basis. England and the United States have standing armies of contract soldiery, while the industrially and democratically more backward of the great nations, as France, Germany, and Russia still resort to a direct tax upon the strength, intelligence and valor of their citizens.

In the case of these countries military service in every sense is a tax. Every citizen coming within the prescribed age, and possessing the requisite mental and bodily strength, with perhaps some few exceptions, must respond to this requisition as surely as the property owner must render unto the state a certain percentage of its value or of its income. The reasons for its retention in these countries may be numerous. The chief one is doubtless

found in their peculiar geographical situation. The earlier differentiation of the citizens into civil and military, or, more properly, into industrial and military, in England and the United States, was due to their physical isolation; and the importance of a standing army of ample size and of an intelligent constituency, and the importance of a wide military education, continues to be great in countries which are separated from each other only by imaginary lines.

Some of the incidents of the system may develop into arguments for its retention, even after the military necessity may have passed, and also for its revival in those countries where it has been abandoned. As, for instance, it has a tendency to cultivate a more intelligent electorate. Citizens become more competent to vote upon questions affecting different sections of the country through some familiarity with the conditions obtaining in those sections and through some acquaintance with their fellow-citizens who reside in them. There is an education in the meeting of minds and the rubbing together of wits of people who have come together from widely scattered sections in barrack life, which might be championed, either in the interest of a more intelligent electorate, or for the sake of better general education as an end in itself. The educational purpose might be still further realized through regular instruction and lectures to the soldiers, in lines of national history. To this end, also, the troops might be moved from point to point, allowing a more forceful presentation of the great epochs of history, and also for the purpose of giving a clearer understanding of the industrial resources of the country. Thus the direct labor tax may, through its incidents, emerge into something else than a tax. The citizen soldiery in Germany, and in the other countries mentioned, involves now a service-tax—the national defense being the main object of its imposition—but if the military necessities are reduced, say, as an outcome of the Hague peace conference, to the capacity of a volunteer army, the retention of the former method would be justified on the principle of popular education. Then the specific tax motive would tend to be lost in the “common good”

motive. Its retention provides a widespread knowledge of military movements, and a general capacity for subordination to discipline, which constitutes a valuable fund to be drawn upon in time of need. But, the general education derived, as well as the usual education of the schools, constitutes a fund of intelligence which the state is continually drawing upon—and we retain the concept of a tax, or not, perhaps, according to our view of the old question as to whether “the citizen exists for the benefit of the state or whether the state exists for the benefit of the citizen.”

In the nature of things, if peace tendencies continue, the enforced military service must become less and less a tax in fact, and more and more a phase of compulsory education. The capacity of military discipline for this evolution in function may be well illustrated by the practice of many schools and colleges in America which make military drill and discipline a part of their curricula—the physical discipline seeming to be a congenial concomitant to the mental disciplines.

An unhappy incident of this metamorphosis may be a certain weakening of the sense of obligation to serve the state—perhaps in a certain commercializing of the sense of citizenship, and this might constitute a strong argument for the retention of the use of arms and the practice of military maneuvers.

A form of the service tax which is not likely ever to be superseded, and which, indeed, is apt to be extended into new spheres of public usefulness, is found in the jury service. Both the grand or inquisitorial jury and the petit or trial jury are essential parts of our modern system of apprehending and trying suspected law breakers and of determining rights. It is conceivable that the primary inquisition, the indicting process, might be performed by a permanent bureau. And yet it seems eminently fitting that the process of sifting out the probable accusations should be done by a body of men fresh from the people. In the matter of the trial of causes, both criminal and civil, it is clear that the jury for these purposes should always be provided by a direct service tax, and a tax which may in no case be

commuted into a pecuniary form, nor paid by the employment of a substitute.

The effect upon the jury system of an increasing resort to arbitration is an interesting subject for speculation. On the one hand, it may diminish the demand for jury service in so far as differences are submitted to arbitrators who are willing to serve without compulsion. On the other hand it may increase it if the law compels this sort of service. That is, if people who agree to arbitrate questions that do not involve legal rights, such as wages, etc., are able to require such persons as they may select as arbitrators to serve it would add a new species of jury service of a very great extent.

Another survival of the principle, and for the most part a lamentable one, is found in the compulsory service tax upon the roads. This principle came into the common law of most modern states from the Roman law. But the excellence of the great military roads built by Rome is not traceable to this method of construction, but to the splendid military organization. The road work done by the peasants in England in the Middle Ages, before and after harvest, provided highways which would only answer to the needs of the very low industrial development of the times, and the present survivals seem to be in most cases anachronisms. The measuring of the public highways up to the demands of an expanding trade was largely due to the investment of private capital in toll-roads, and to some extent to the commuting of the service tax into a tax on land. The results of the latter kind of transformation are well seen in Scotland, where by an act passed in 1669 members of the agricultural population were required to work the road for six days in the year, which tax was commuted under George III. to a land tax, rated according to valuation. McCulloch says that previous to the commutation the roads in Scotland were in the worst condition, but since then they have been among the best in Europe.<sup>1</sup> The steps in the history of the transformation of the road taxes from services into money, in so far as it has been made, have not

<sup>1</sup> *McCulloch on Taxation* (1845), p. 3.

been investigated for the purposes of this study, but they may have come about through the custom, with which most Americans are familiar, of allowing the taxpayer the alternative of paying in kind or in money.

Evidently contractual labor is more efficient in road work than forced labor. The city streets, for example, and the turn-pike roads owe their excellence to the kind of labor employed upon them. The differentiation of employments in urban communities renders a large percentage of the population very deficient in this kind of labor; but the agricultural population, on the other hand, are poor road workers, chiefly through disinclination. The universal inclination to get quit of one's obligations to the state as easily as possible finds a splendid opportunity under a system of road work with a friendly neighbor for a boss.

It may, however, be going too far to say that the service tax for the support of the roads has in all instances survived its usefulness. In some communities the direct method may be really the most economical—and it may sometimes happen that this is the only way open for building the roads. An instance of this latter sort was noted at the town of Chandler, in Oklahoma, in 1890. It was an instance of one of those instantaneous and spectacular settlements which has been characteristic of the opening of lands in Oklahoma and Indian territories. The town existed on the official chart issued by the government before anyone was allowed to inhabit it; it comprised a half section of land of rugged contour, and was foreordained by the act of Congress to be the first capital of Douglas county, which county was formed out of the recent tribal lands of the Iowa and Sac and Fox Indians. It was several days after the farm lands were open before the town site was subject to settlement, during which time the expectant citizens were camped without the city limits, pending the completion of the survey. The day and the hour and the minute were finally announced, and at the tick of the governor's watch he waved his handkerchief, which was a signal to a soldier to fire a volley, which, in turn, was a signal to the throng lining the border of the town site that they might come



in and seize whatever they could. Shops, stores, newspaper offices, etc., were immediately opened for business, which was not inconsiderable, since there was already a pretty fair county-full to draw upon. The ruggedness of the land and the fact that the official survey had regarded solely the points of the compass, and not in the least the lay of the land, very soon created a pressing highway problem. Traffic followed the natural lines for a little while, and matters would have gone on well enough but for the curse of the American inelastic conception of a proper town survey. As it was, it was not long until lot owners had enclosed their properties with wire fences and had forced the traffic onto the rocks and into the chasms. Grades and bridges became an immediate necessity, and the citizens assembled and voted a labor tax of three days' work per capita, or a cash equivalent, to meet this most pressing need. It was, of course, an extra legal proceeding, but the pressure of public sentiment was strong enough to make the resolution effective. In fact, in this case, there was scarcely the need of pressure of any kind; and it is noteworthy that when a social organism is young, the individual units are remarkably loyal in its service.

But it may be said that where a service road tax is useful in one case it is vicious in a thousand others, and the tendency must be continually away from it.

In addition to the other forces enumerated the tendency toward the contractual system as applied to the roads is hastened, in the course of the development of a country, by the increasing difficulty of making those who use them pay for their construction and repair. This cannot be done under any free road system. As the great common highway emerges the volume of traffic proceeds from various and distant quarters increasing in size and wearing more deeply into the roadbed as its objective point is approached. It is manifestly unjust to require the abutting property owners to provide a highway for this foreign traffic, while in the small tributary roads the equities between citizens are not seriously violated by the direct method.

The purchase of the turnpike roads on the part of the public and the turning of them into free roads must prove a powerful factor for reform in methods of road improvement. If they were turned into public toll-roads the benefit theory would be entirely subverted. But such a policy would be repugnant to present ideas and tendencies. An elastic policy might separate the main traveled road, as is done in some cases, from their small tributaries and leaving the latter under the direct system place the former upon a money basis, and tax the adjacent property owners an equivalent to the labor tax of pioneer days, plus a small amount on account of betterment. But in America, particularly, a desire for uniformity of system is likely to create sweeping changes, and methods of road construction which are necessary to one class of roads are more than apt to be extended to those which might still endure the old system.

The labor tax may find considerable employment in the administration of charity. Such administration in America seems to be tending to a voluntary central system, but in Europe, and particularly in Germany, the tax element enters to a large extent. Under the famous Elberfeld system, which is accounted among the very best, the duty of covering certain specified territory and of looking after persons who are dependent upon outside relief, or who are in a way to become dependent, is imposed upon certain specified citizens. It is their duty to reduce to the utmost the amount dispensed in alms and to place their charges, wherever possible, in a way to earning a living. The direct personal tax is calculated to prevent pauperism, while the indirect or money tax is calculated to increase it.

Thus far we have been reviewing the old forms of a service tax which may be characterized as individual service, in that the state commands the services of the individual direct, and in that the individuals contribute their respective quotas with the strength of their bodies or of their minds. These are survivals of an individual economy as distinguished from the later social economy. The general conclusions drawn from the study thus far may be stated as follows:

First, that a general or a class service tax is, generally speaking, financially vicious. From the standpoint of pure finance even the military tax is not excepted in this indictment, although owing to other considerations the balance of advantages may be in its favor. Specialization in industry has rendered the great majority of persons of either sex or of persons between any certain ages after maturity unfit for any single service. Work at the desk unfits a man for work on the roads; the clerk is deficient in both mind and muscle for manual service. The manual laborer, or the person of outdoor activities, on the other hand, is likewise unfitted for any sort of clerical work. The same process of rendering persons dependent and helpless in other lines than their own is going on in all departments of mental and manual labor. Hence wherever industry is not in a very primitive stage of development the most efficient service is the contractual service, and it is as important for the state to hire servants by voluntary contract, who are fitted for the kind of work required, as it is for the general industrial welfare that people be left quite free to select their private employments.

Second, that a wholesome form of enforced public service includes such duties as peculiarly appertain to citizenship, as in the case of jury service. The excellence of the jury system is not found in the extraordinary intelligence of the average juror, but in the fact that he is fresh from the people and is assumed to be in touch with the motives that influence and control men at the present time in their social and industrial relations. All the faults of juries are insignificant compared with what would certainly be a hard and fast, mechanical, and static tendency of an office conscious, and case-hardened tribunal. The very *naïveté* and simplicity of our jurors constitute at once the elastic and the dynamic elements in our judicial system. It is essential to social growth that causes be heard and determined by persons who are called in from other avocations for the purpose, and who are not too familiar with the more venerable tenets of the common law.

Third, that another wholesome form of public service which is imposed upon individuals is that which takes note of peculiar

qualifications of the individuals for the service desired. The best illustration of this class would perhaps be found in compulsory service in the cause of charity. For such service those members of the community would naturally be selected who possess the finest balance of human sympathy and sound judgment.

Attention is now directed to a new form of service tax. It might perhaps better be called a proposed new form, for if it exists at all now it is only in germ and it has found, as yet, no place, in the essays of financial writers. A service tax is here meant which is imposed for specific purposes, not upon individuals, but upon industries or corporate persons.

In the disqualification of the individual for personal service of the state, we are apt to read the doom of the general principle of a service tax—and not to recognize the growing power of the various institutions that are undermining the capacity of the individual, to serve directly the needs of society, which needs have, in large part, grown out of modern industrial organizations. We may fall into this error by failing to shift our view from the individual to the industrial aggregation or corporation.

In view of the great difficulties that have been encountered in attempts at securing a just money tax from corporate wealth, and of the general failure of such attempts, especially in the case of railroad and street-car companies, it is rather singular that attention has not been before this directed to schemes for making them directly serviceable to the state. It is also strange in view of some of the urgent and growing wants of the state, which are, in a sense, creatures of the expanding industrialism. Take, for example, the post-office service which is so vital a part of the industrial life. Cheap postage is undoubtedly a subsidy to general national industry as well as an educational force of high value. In the interest of cheap postage the United States is now covering, out of the general tax funds, a considerable annual deficit. Why has it never occurred to the members of Congress to wipe out the post-office deficit and provide for a still further

reduction in postage rates by taxing the services of the roads for the carriage of the mails? Is it perhaps because of the absence of a service-tax doctrine? It has been one of the problems of the century just closed how to make the railroads contribute their just share to the support of the state. The local units of government are beginning to abandon the task and the state governments are taking it up. Even if they succeed measurably well might not a direct service tax be more in the interest of both the state and of the companies themselves?

Whatever duties should be placed upon the railroads on behalf of the public it would be better if it were done by the Federal government. The interstate character of the railway service as well as the interstate character of commerce to which it ministers seem to make local fiscal control illogical and often vicious if successful. But whether the reader agrees with this or not he will likely be able to work out for himself a scheme of a service tax, and it is in nowise essential to suppose a revolution in the present fiscal policy in order to construct a scheme of railroad service tax. But for convenience of treatment it may be best to start with the assumption that this is a Federal matter. If the taxing power were centered in the Federal government the policy as to exacting services or money should turn upon the capacity of the roads for direct service. As to the possible services which the roads might render the following might be enumerated:

First, service to the post-office department, certainly in transporting the mails and possibly to a limited extent in providing office room in connection with small stations, and free transportation to mail carriers by local lines.

Second, for the transportation of members of Congress—and the same requirement might be made on behalf of the state legislators; and at one stroke the mileage perquisite might be done away with and the roads deprived of the pass method of currying public favor.

Third, for free transit to United States marshals and deputies and the free transport of prisoners—and this economy might

also be extended to the sheriffs and the constables under the various state and local governments.

Fourth, free transportation of any of the employees of the government while engaged in public work.

Fifth, to use this power to patronize public education, in affording free transportation to teachers and students when going to and returning from any colleges or universities, or high schools or academies, or other schools.

The advantage to public education of this species of tax merits special attention. It seems to meet what is perhaps the most urgent demand of the educational system, viz., better grading. This principle has already been described as follows :

To what extent the children of the different grades should find instruction from teachers trained in the different subjects is not an easy question to determine. But in so far as this species of specialization is introduced the best results will accrue where the sections of the different grades are sufficiently numerous to relieve the teachers of the necessity of adapting their methods of instruction to pupils of very different degrees of progress. A teacher in history, for example, will do better work if he repeats the same instruction to pupils in different sections of the same grade during the day than if he is obliged to adjust himself successively to different grades.

And the existing situation is thus described :

In so far as this is practicable it furnishes an argument in favor of enlarging the school districts in the cities and perhaps in a great majority of cities of concentrating them within a single building. Here it should be noted that the best possible grading is a much more difficult one in America than it would be in the cities of Europe. The compactly built cities of the continent, rendering public parks and shaded boulevards a breathing space necessity, have at least one compensating advantage, viz., abundant opportunity for the most thorough grading. American cities, on the other hand, with separate homes for most families, and with ample front and rear and side garden space the rule, have to meet the problem of distance to schools, and so long as legs are the common instruments of transportation the size of the school district must be limited by the capacity of the smallest legs, and the grading possibilities are likewise contracted.

And the following remedy is suggested :

Our splendid city distances are the foster parents of still more splendid urban and suburban street-car systems. The trolley has annihilated city distances and brought everyone within easy reach of everything and

everybody, and it is time this agency were brought to bear upon our schools, the grammar schools as well as the high schools.<sup>2</sup>

This kind of a tax might be better managed by the state than almost any other. Free transportation to and from any colleges within the state would be an appreciable bonus to higher education—in many instances equivalent to a free scholarship. It would also tend to raise the standard of education by removing the barriers of distance. It would, in fact, give to the colleges of the state more of the character of one university, allowing the small colleges to narrow their range of courses and offer as high grade of work as that offered by the larger institutions.

The state might also turn this power to the great improvement of the high school and the academy systems. It could then establish a standard for high schools and academies by fixing a minimum number of instructors in an institution, facilities for concentration in central institutions being provided. As, for example, a county might concentrate its high-school funds in some instances upon a single institution, or, where circumstances favored, high-school districts might be provided for including a radius of say forty miles at terminal centers—or of forty or fifty miles in length along a single line of road.

The county or local division of the county might be given authority to tax in this way and thus be enabled to build up a county system of schools of a high degree of excellence in counties favored with an extensive railway system. That is, there might be one strong county high school instead of a number of weak ones scattered among the villages of the county. And the feeders of the high school would likewise receive large increments of strength through the consolidation thus rendered available.

The principle might even be applied by the township or the school administrative district, and the road tax be made to greatly expedite the present movement towards school consolidation and grading in the country schools. The small schools

<sup>2</sup> See article "Public School Financing," by the writer, in the *Journal of Pedagogy*, v. 12, No. 3.

along the lines of road for quite a distance might be brought together and consolidated into a fairly well graded system.

The scheme is certainly workable in the interest of the city schools. Any city of, say 30,000 population or more, might assemble all the existing ward schools at a common center and work out the best possible system of grading.

So much by way of suggestion as to the wants which the various divisions of government might supply through the direct method of taxing railroads. It is purposed here simply to open the question as to the expediency of substituting, in part or in whole, a service tax for a money tax on the instruments of transportation, and as to whether such an innovation in our fiscal arrangements might not at once improve the public service in some important points and more equitably distribute the public burdens.

Now, as to the nature of the burden from the standpoint of the roads. It would seem upon the whole that they can better afford to pay in kind than in money. At least some forms of service payment would rest very lightly upon them. One of the most appreciable burdens among those mentioned, perhaps, would be that of carrying the mails. The addition of one or more cars does not add greatly to the labor cost, but it would be an appreciable tax upon the machinery of the engine and upon the fuel account. The transportation of government officials, on the other hand, would scarcely be felt at all. This kind of burden would be so widely diffused and it would come in such diluted form that it would be inappreciable as compared to the benefits conferred. And the same thing might be said as to the conveyance of students to and from colleges within the country or the state. In the great majority of these cases it would mean only a filling of seats which would otherwise remain vacant. And where additional cars would be required, the burden would fall upon those roads which are blessed with a heavy traffic, and which would be well able to bear it. The weak roads would be generally the best prepared to take care of the additional service without incurring extra cost. The extra travel resulting



from the arrangement could scarcely be called a burden, and the loss of fares, which the roads would otherwise receive, would not be considerable.

If the scheme were attempted in the interest of the high schools and of the country schools, where the burden would be of daily occurrence during the school term, it would be light if the convenience of the general traffic would fit in with the school hours. Where additional rolling stock would be required, those cars that would otherwise be discarded might often be sufficient to meet the demand; and as to the time of the morning and evening trains there might be a certain yielding of custom on both sides. The only absolutely essential point would be that a full school day must intervene between the arrival of the train in the morning and its departure in the evening.

In the cities also the service burden would prove much lighter than a money burden. It would deprive the companies of very few fares and fill up many cars which would otherwise be quite or nearly empty, for it must be remembered that the hours of going to and returning from school are hours of light street car traffic. Whatever additional rolling stock would be required could be supplied in the form of special trailers, thus avoiding the necessity for additional gripmen or conductors.

This sort of service tax, when applied to railroads and to trolley lines, will be found, upon examination, in almost every instance to obey the canon of taxation which prescribes that the burden be imposed at a time and in a manner when it may be the most easily and conveniently borne. And it will be found also to respond to Adam Smith's fourth canon of taxation, which prescribes that a tax should take out and keep out of the pockets of the people as little as possible over and above what goes into the public treasury.<sup>1</sup> In fact, the cost of administration would be as near nothing as possible. In the great majority of instances it would involve absolutely no cost of collection. Where free carriage is required the holder of a pass would be received on the same terms as the holder of a ticket. In the

<sup>1</sup> *Wealth of Nations*, book v. ch. ii. part ii.

case of the carriage of postal cars no excuse could be found for not attaching them to trains when presented, and a provision of penalties punishable by the courts should be sufficient to prevent any attempts at evading the burden. In the case of free transportation to the city schools, the companies might sleep upon their duties and neglect to provide a sufficient number of cars at the required hours were it not for the certain, immediate, and energetic complaints and protests on the part of parents.

Altogether such a tax would come as near to being automatic in its operation as any that could be contrived. Its enforcement would require the supervision of no bureau, and perhaps of no system of inspection. The ordinary law courts, acting upon complaints, would perhaps be sufficient for all requirements of administration.

The railroads have been adverted to at this length because they furnish the most conspicuous illustrations of ways in which the service tax may be applied to satisfy public wants. Other forms of corporate wealth might also be cited, as the telegraph companies, which might be required to transmit messages in connection with public affairs in lieu of money taxes; and banks might take charge of a large share of the disbursing business of the state, etc.

An investigation of the different possible applications of the principle which might be made to the advantage of the state might show the subjects of the tax to be monopolistic in character, and therefore as fit subjects for taxation as rent-yielding land. It might also be found that the tax would not be easily shifted. However, it is not intended here to present any hard and fast theories of the application of the service tax to distinctively modern conditions. While some kinds of corporate industries, which are very hard to reach by means of a money tax, seem to be capable of rendering valuable direct services to the state, it would be manifestly improper at this stage in the investigation to attempt a clear and definite classification of such industries. For example, the use of a service burden might sometimes be justified, even though it were shifted, and the

patrons of the industry should have to make it up in the form of higher charges, the public wants which were satisfied being the prime consideration. Neither a logical classification nor a careful examination of incidents are part of the purpose of this essay, which is, first, to give to the service tax what seems to be its rightful place in fiscal history; second, to direct attention to its present survivals in its old individual form; and, third, to indicate certain ways by which it might now be applied, not to the industrially transformed individual, but to some of the organisms into which industry has grown.

The corporation service tax may now exist in germ. As, for example, the establishment of a legal rate of fare on the railroads, as in the case of the New York Central, might be construed into a service tax to the extent of the difference between the legal rate of fare and what would otherwise be the market rate, the tax being imposed in the interest of the general public. The state may be said to be exercising the taxing power in this direct way in order to minister to the pleasures of the public or in the interest of trade, or it might be said to be in the interest of popular education. Attempts of several American cities to limit the fares charged by street-car companies might also be construed into attempts to impose a tax on behalf of the general public. And it may be that if the tax concept were unmistakably in the minds of the legislators, and if the fact that it was intended to be a service tax, in lieu of a money tax, were clearly set forth in the body of the bill or the ordinance, that such attempts would stand a better chance of receiving the sanction of the courts.

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## ANALYSIS OF THE BUILDING-TRADES CONFLICT IN CHICAGO, FROM THE TRADES-UNION STAND-POINT.

ALTHOUGH it is yet too early to predict the outcome of the present conflict between the various interests in the building trades in Chicago, it is possible to take a survey of the contending parties and to analyze the forces at work.

Of all the labor troubles that have taken place in Chicago, the present one in the building trades is probably of greatest significance. The sympathetic railroad strike in 1894 presented a more spectacular appearance, from the presence of the United States troops, the burning of railroad cars, and the arrest of public traffic. But the whole affair was only a flash of the consciousness of power that always lies smouldering in the laboring classes. It was not based on any well prepared plan, nor sustained by organic effort, and was, consequently, doomed to be extinguished when it met with determined resistance.

The present conflict, however, is not the mere dash of a moment's irritation: the solid organizations—the outgrowth of years of experience—the consolidation of kindred interests within the ranks of labor as well as of capital, present a clear-cut manifestation of the economic and industrial forces. These forces mold society into well-defined classes, with interests that, when the time is ripe, will clash in inevitable conflict.

The federation of labor unions that constitutes the Building Trades Council presents the most perfect type of trade-unionism in America. We may see here as in a magic mirror the struggle of a century condensed into a few years: the desire for a greater participation in the fruits of labor, the sense of power in organization, the federation of individual unions for more effective demands, the effective control of the labor market. No better opportunity can be given for clearly understanding the forces that compel the existence of labor organization than the study of the situation within the building trades of Chicago.

Let us, therefore, see how the organization of the laborers came about and what is its influence upon the employing class, and then we may draw some general conclusions. There is one condition which makes an effective organization possible in the building trades, and that is the absence of elaborate machinery that can take the place of human labor. Where a branch of industry is operated with the help of extensive machinery—"fixed capital,"—an effective labor union becomes impossible. So, for instance, the Homestead steel works, where the once strong labor organization has been broken down. The same is the reason why the employees in the stockyards cannot be organized. The same fate has overtaken "Pullman Town." The men are dependent upon the machine, and the owner of the machine is also the master of the men.

But in the industry here under consideration the machine plays a comparatively unimportant part, existing only in the simple tools of the men. The individual's skill and knowledge cannot be supplanted by an automatic machine. Therefore, in the struggle for higher wages, the men are not hampered by the competition of machine labor that adds its strength to that of the employer, but it is man against man, the one indispensable to the other.

Another circumstance also adds to the possibility of effective unionism in this branch. There has hitherto been no strong organization among the employers that could have presented a solid front against the encroachments of labor. Even if one employer had been willing to refuse to sign the proposed wage scale, and had felt the power to do so, the fear that his competitor would have taken advantage of his enforced idleness would compel him to pay the general rate. Thus the competition among the employers would always leave chances of new employment for the laborers.

## I.

It is impossible to give a complete history of the various unions constituting the Building Trades Council. It must suffice

to say that since 1886 trade unionism has rapidly grown, the eight-hour day has been extensively introduced, and wages have risen. But until 1890 there was no effort toward concerted action. The individual unions struggled on by themselves. In the summer of 1890 the carpenters were striking for better conditions. At one building where union bricklayers were employed the union carpenters went on strike. Their places were taken by non-union men. The strikers tried to induce the new men to leave the building, but the union bricklayers joined forces with the "scab" carpenters, and with their bricks drove their brother unionists away for interfering with the erection of a scaffolding upon which they (the bricklayers) were at work. However advantageous this may have been for the interests of the contractor, the men soon found that in fighting each other they could secure few advantages for themselves.

The increased activity within the building industry in 1892 in connection with the World's Fair raised the spirits of the trade union world, the present Building-Trades Council being organized as the result. Nothing could give a better insight into the character of this Council than a short review of its constitution. The preamble reads :

The object of this Council is to construct a central organization which shall subserve the interests of all the labor organizations engaged in the erection or alteration of buildings ; for the purpose of assisting each other when necessary ; thereby removing all unjust or injurious competition, and to secure unity of action for their mutual protection and support.

*Membership.*—Section 1. This Council shall be composed of delegates chosen as hereinafter prescribed by any *bona fide* labor organization, whose membership is composed of men engaged in the building trades.

Section 3. No person shall be eligible as a delegate to this Council who holds a political office, either elective or appointive ; or who is not a citizen of the United States ; or has not declared his intention to become such.

This rule has apparently been violated in the person of its president who is also a member of the Civil Service Commission.

*Officers of the Council.*—Section 1. The officers of this Council shall consist of a President, Vice President, Recording Secretary, Secretary-Treasurer, Reading Clerk, Sergeant-at-Arms, three Trustees, and three Directors.

*Committees.*—Section 1. There shall be appointed by the president . . . with the consent of the Council . . . a Credential Committee, Organization Committee, Grievance Committee, and Legislative Committee.

*Duties of Standing Committees.*—Section 3. It shall be the duty of the Grievance Committee to investigate all grievances that may be referred to the Council from time to time by organizations or delegates affiliated with this Council, said grievances to be presented in writing to the Council. All grievances must be referred to the Grievance Committee without debate.

Section 4.—It shall be the duty of the Legislative Committee to determine what legislation will be best for the interest of the laboring man, draft bills for such legislation, present them to the proper legislators, and report from time to time the best methods of securing the passage of the same, providing that no bill shall be presented to any legislative body without the sanction of this body.

*Board of Business Agents.*—Section 1. There shall be established as part of this Council a Board of Walking Delegates or Business Agents, composed of the properly elected business agents of the various unions represented in this Council.

*Revenue.*—Section 1. The revenue for the maintenance of the Council shall be derived from the subrenting of halls and the sale of working cards issued quarterly by the Council to the trades herein represented. One side of the card shall represent the Council, the other the trade to which the holder belongs.

These working cards play a very important part, for without a card a man cannot secure employment.

*Assistance and Strikes.*—Section 1. Agreements or demands for an advance in wages, or an abridgment in the hours of labor shall be presented to this Council in writing between the 1st of October and the 1st of April for their approval and indorsement.

Section 2. Said agreement or demand shall give full particulars and shall be read at two meetings before final action is taken. The Recording Secretary shall notify all organizations to have delegates present when, if concurred in by two thirds vote of all trades present in the Council, the action shall be binding. This does not prevent any trade from acting on its own responsibility.

*Grievances and Arbitrations.*—Section 1. Any organization or delegates having a grievance shall present the same to the Council in writing; no delegate shall sit in judgment on any case affecting the trade to which he may belong.

Section 2. When trouble occurs on any building or job, affecting any trade represented in this Council, it shall be the duty of the Business Agent to immediately endeavor to settle same with contractor or owners, in accordance

with the trade rules and to the satisfaction of the trade involved, failing in this and a strike being necessary, the Business Agent shall have power to call a general strike, but before doing so he shall lay the matter before the Council or Board of Business Agents at their next meeting and be governed by their action or decision, which shall be equally binding on all trades in this Council engaged on the job or building. When a trade has no Business Agent the Chairman of the Board shall have power to call members of said trade off when strike is ordered. It shall require a majority of the trades voting to order a strike. Unit rule to prevail.

*Trade Rules.*—Section 1. It shall be the special duty of this Council to use the united strength of all trades represented herein to compel all non-union men to conform to and obey the laws of the trade to which they should properly belong.

Section 4. No member of any trade affiliated with this Council shall be permitted to work on any building or job under police protection or be permitted to handle any material that is the product of convict labor.

Section 5. It shall be unlawful for members of one trade to do work pertaining to that of another without their consent. No member of any organization affiliated with this Council can carry working cards of any two building trades.

Section 6. Eight hours shall constitute a day's labor.

Section 7. All members of affiliated organizations are compelled to show their cards when requested by Business Agents or other member working on job, irrespective of trade, who is himself in possession of a card.

In connection with the constitution of the Building-Trades Council, it will be appropriate to give a few paragraphs from the constitution of the Board of Business Agents.

Article 2. The object of this Board shall be to unite and associate together all business agents for the purpose of mutual assistance, and to better accomplish the work in all parts of Chicago and Cook county.

Article 6. No association shall be entitled to more than one vote on any question, but any association having two or more walking delegates may be seated at any meeting.

Article 9. Any organization being represented in the Building-Trades Council not having a delegate in the field and having any trouble upon any building, it shall be the special duty of the Board to do all in its power to adjust and settle the trouble as far as possible.

Article 10. Whenever any agent has a grievance on a job, it shall be his duty to confer with the respective contractors, the architect, and owner, and do all in his power to accomplish a satisfactory settlement; failing in this, he may call upon the Board for assistance.



It need, perhaps, not be said that the Business Agent, so well known through the newspaper discussions as the "walking delegate," is the elected representative of the individual labor union. The advantage which this central organization gives to the laborers in their struggle for better conditions is twofold. The weaker union is placed upon the same level as the stronger one. Some of these unions have always been able to fight their own battles, because they have controlled the total labor power. The history of the Stone Cutters' Union has been one of almost unchecked advance, even in the face of the introduction of labor-saving machinery. The Plumbers' and Gas-Fitters' Unions have drawn within their ranks every member of their craft. But other unions, especially of the unskilled laborers, like the hod-carriers and building laborers, could not have attained their present position without the shielding power of the more fortunate unions. This fact reflects itself in their greatly increased wages, compared with other labor of the same class.

The second great advantage has been the power of the sympathetic strike. What this power means we shall see in the later discussion.

Nor does the effect of this organization end here. A kindred organization, called the Brotherhood of the Building Materials Council, is effected by all the various unions that make the materials handled by the building trades: woodworkers, brickmakers, etc. Although no formal agreement exists between these two councils for mutual support, yet the common brotherhood of labor will assert itself, as various occasions have made manifest. The woodworkers, in their struggle for recognition of their wage-scale, were helped by the refusal of the building trades to handle doors, windowsills, etc., that did not bear the woodworkers' label.

Before the subcommittee of the Industrial Commission that commenced its sittings in Chicago on March 20, 1900, to hear evidence regarding trade conditions, the complaint was made by a mason contractor that he had been compelled to cancel an order for brick from a non-union company, and to buy from a

company whose men were affiliated with the Brickmakers' Alliance. It is a notorious fact that the stone intended for the new Post Office building met the condemnation of the Building-Trades Council because it was cut in a non-union quarry.

On the other hand, the building trades can also count upon the support of the Building Material Council in an emergency. Add to this the financial and moral backing that the Building-Trades Council in Chicago receives from similar organizations in other leading cities, and we begin to comprehend the power which organized labor may assert and what influence it will have in the future.

## II.

Let us next look at the situation within the employers' camp. Here we have associations formed by building contractors, as the Masons' and Builders' Association, Master Carpenters' Association, Chicago Master Plumbers' Association, Cut Stone Contractors' Association, etc., in all fourteen different associations. But as the necessity for mutual protection is not an ever-present reality to them in the same degree as to the workingmen, these associations have never embraced the full number of contractors in the various branches.

However, the growing strength of the Building-Trades Council would naturally tend to drive the contractors' associations into a closer union. In fact, the members of the former blame themselves that through their short-sightedness they made such an organization possible. In many of the agreements between the respective organizations of workingmen and contractors of the same branch during the years 1897 and 1898, there was a clause prohibiting the men from working for contractors that did not belong to the contractors' associations. Such an understanding existed, for example, between the Journeymen Plumbers and the Master Plumbers. The effect of this agreement was to drive every master plumber who needed to hire labor into the Master Plumber's Association. The men soon found that through this policy they were nursing a child that would grow to be their strong enemy. Nevertheless, from this nucleus

the present Building Contractors' Council has developed. It was formed in April 1899, but did not attain any importance until fall, when preparations for the coming trouble drove the contractors more firmly together. It has been estimated that more than 70 per cent. of the building done during the last year was done by contractors not belonging to the Council. At the outbreak of the trouble, there were about twenty-one hundred firms belonging to the Building Contractors' Council.

The rules of the Council are very few. The singleness of purpose obviates more explicit regulations. Among them are the following:

**RULE I.**

This organization shall be known as "The Building Contractors' Council," and its object shall be to foster, protect, and promote the welfare and interests of its members, engaged in the construction of buildings in Cook County, Illinois.

**RULE VII.**

Section 1. The Council shall have full power to take any action which may be for the best interests of any Association allied with the Council and, should the condition demand, a lock-out may be ordered by the Council to protect its interests.

Section 2. No Association allied with this Council shall hereafter enter into an agreement with their journeymen which shall prohibit a sympathetic lock-out.

**RULE X.**

Should any differences arise between employer and employee, whereby the interests of any Association shall be impaired, such Association may make a full statement of the facts, through the Secretary, to the Council, and he shall call a meeting of the Council to take active measures to secure and protect the interests and rights of the Association so aggrieved.

The spirit of organization has not exhausted itself here. The architects with whom the contractors naturally come in close contact formed a few years ago the Chicago Architects' Business Association. About two years ago they strengthened their union by inducing the legislature to pass a State License Law for architects. The license fee of twenty-five dollars proved an effective bar to many small architects, who on the border line between laborers, contractors, and architects tried with the sole help of their skill to gain economic advancement.

On February eighth resolutions were adopted by the Architects' Association :

(1) That we believe that an improvement in the methods of both contractors and unions could be suggested, but, as they are now before the public, we do not hesitate to sympathize with the employers of labor, inasmuch as the arbitrary rulings of the business agents have made impossible the arbitration proposed by the master builders looking to a settlement of the controversy. (2) That every effort be used to resist any attempt on the part of the unions to introduce contractors from outside to the displacement of those having contracts on hand, or to offer to the individuals composing said unions to complete any work now under the supervision of Chicago architects.

Alongside the contractors' union we have the organization of the material manufacturers, who furnish all the supplies to the contractors. It is a rule among all these supply-houses that they will not sell any supplies to the general public, but only to individuals or firms that make a regular business of their line of supply. This means that if an owner of a house needs to replace an old radiator, he cannot buy a new one from the supply house, but must go to a master steam fitter to have him do the work. It is further claimed—and a good deal of evidence has been adduced to prove it—that the supply men are not even impartial in their dealings with their legitimate constituency, but give rebates to members of the contractors' associations, and even in many cases refuse to sell altogether to firms outside this association. Thus a representative of the Masons and Builders' Association admitted before the Industrial Commission that members of his association received a rebate from the regular price in the purchase of bricks. The same is true of lime, vent linings, copings, etc. According to a rule of the Masons and Builders' Association the stone used for rubble and footing stone must be bought from members of the Chicago Stone Dealers' Association.<sup>1</sup> One contractor testified before the Industrial Commission that he had been fined a certain sum of money for buying materials from sources not recognized by his association. A firm of contractors that has been conspicuous throughout all this struggle because it has sided with the men

<sup>1</sup> See *Chicago Tribune*, November 29, 1899.

against the contractors admitted that the organized manufacturers had refused to sell to them.

These understandings between the associations of contractors and material men have been brought about by threats of withdrawal of custom and the mutual interest to build up a strong organization of men who can control large capitals, and consequently are able to obviate the friction and loss incurred in small sales.

Another of the advantages of these organizations lies in the possibility of "pooling." This means that when a contractor makes a contract with the owner of the prospective house, the interests of other contractors are also looked after. In 1897 there was an agreement between the excavators and the Master Masons' Association, whereby, if an owner wanted to put up a building and did the excavating himself, when he gave the rest of the work to the Master Masons' Association the excavator who was in with the combination of this association would compel the contractors that were figuring on the mason work in the building to add a considerable sum as his share of the total price. It has also been stated in the newspapers that the contractors who have been likely to bid on some desirable work have agreed about a minimum figure, the stipulation being that whoever was awarded the contract should pay a bonus out of the artificially increased profit to the rest of the combine. In the nature of things there is no impossibility nor even improbability that these "pools" should exist in strong organizations, where the individual members do not feel that they can take any other advantage of each other.

### III.

We have so far outlined the positions in the two camps. Among the laborers there are various unions, some strong, others less so, affiliated into the central organization of the Building-Trades Council. In the background we see other similar organizations whose interests closely touch those of the building trades and who are ready to furnish what support and ammunition

conditions will allow. In the other camp we see a similar situation. The same self-interest has united the contractors' associations into the Building Contractors' Council, backed by the Architect's Association, real estate men, and the dealers in supplies. Watching them with intense excitement is the interested but impotent public. The retail dealer is gloomy, the department-store manager grumbles, the newspapers wave their sheets frantically, each cursing the faction that most affects his interests.

The status of the contestants at the beginning of the strike was as follows: Agreements were signed between the individual parties of each camp, some to remain in force till March 1, others till May 1, 1900, and still others not to expire till 1901. But the opportunity offered to take time by the forelock. The Building Contractors Council precipitated the struggle by adopting at a meeting held November 17, 1899, the following resolutions:

That on and after the first of January 1900, the trades represented in the Building Contractors Council shall not recognize,

1. Any limitation as to the amount of work a man shall perform during his working day.
2. Any restriction of the use of machinery.
3. The right of any person to interfere with the workman during his working day.
4. The sympathetic strike.
5. Restriction of the use of any manufactured material, except prison-made.
6. The right of the unions to prohibit the employment of apprentices.

These resolutions, when taken in connection with the following, would indicate that the issue is not a matter of wages but of the existence of the Building-Trades Council:

*Resolved*, That when the unions affiliated with the Building Trades Council have permanently withdrawn their support from said Council, and express a desire to treat with individual associations of like trades, and recognize the equal rights of all to work for whom they may see fit, and the right of the employer to hire and discharge whomsoever he may see fit, then we will pledge our individual associations to pay the rate of wages in force February 5, 1900; eight hours per day; six days per week; time and a half for overtime; double time for Sundays and holidays; no restrictions as to the use of manufactured material other than prison-made; no limitation as to the

amount of work a man shall perform in a day; no restrictions as to the use of machinery; each association will treat as to the methods of enforcing the above.

If the Contractors' Council found itself strong enough to break down the Building-Trades' Council, it would then see its way clear to regulate the wages in the individual unions according to its own estimate of efficiency and justice. The cessation of work began February 5. It is not within the scope of this paper to give the history of the struggle, nor to discuss the merits or demerits of either side, nor to decide whether the clash might have been avoided had either party made judicious concessions. Let us look rather to a few items that seem to be the point of contention:

Limitation as to the amount of work to be done in a day,  
Restrictions in the use of machinery,  
The arbitrary action of the business agent,  
Sympathetic strikes.

Limitation as to the amount of work exists in the agreements of the Plumbers Unions, where a day's work is strictly defined. In the working rules of the carpenters there is this rule:

Any member guilty of excessive work or rushing on any job shall be reported and shall be subject to a fine of \$5.00. Any foreman using abusive language to, or rushing the men under his supervision, shall be fined not less than \$10.00 and ruled off the job.

This restriction of the amount of work means, so far as wages are concerned, a cut in the number of hours. The psychological effect of this enforced leisure upon the temper of the workingman is a matter difficult for a layman to judge of. Whether it would be better to demand a shorter working day and intense application instead of the present adjustment is a problem for the master and man to settle. The former system would undoubtedly lend itself less to declamatory effect.

In but one of the building trades has machinery on a large scale found entrance. Quoting the summary of a testimony before the Industrial Commission: "In June 1899, there were twenty-eight yards in the city of Chicago which were employing machinery. These yards represented 75 per cent. of the employing capacity of the labor market in this particular branch of the

trade. The value of the machinery in use at that time is estimated conservatively at \$110,000. This machinery has remained idle ever since June 1899, in consequence of the arbitrary action of the Stone Cutters' Union, and it is practically an absolute loss to the cut-stone contractors, as the machinery is fast becoming useless by reason of rust, corrosion, and loss of many parts due to its being inactive." The futility of struggling against labor-saving machinery has been demonstrated long ago; and the suffering of the men during the transition period has always been a cause of regret. It is surprising, therefore, that this union has been able to resist so long.

But the vital point in this whole struggle is the sympathetic strike. Beneath this phrase lies the key to the whole situation. The sympathetic strike is the *raison d'être* of the Building-Trades Council. To abolish the sympathetic strike is to abolish the Building-Trades Council. The Business Agent without the power of the Building-Trades Council behind him may advise and plead, but he cannot enforce the demands of his union. The grievance most frequently occurring is caused by the question of wages: the amount, the regular pay day, any attempts at "rebating," or returning part of the wage to the employer. Upon this question every union is keenly sensitive. Infringements of this rule cause most of the strikes, as a union considers anything less than the letter of the agreement a breach of contract. An employer may consider that a man is not worth the stipulated wage and may try to pay him accordingly; or some misunderstanding may arise which causes complaint; and the Business Agent, as the representative of both the union and the employee, steps in and, if the contractor is not willing to give satisfaction, has power to call an immediate strike.

Other causes also arise, in which the contractor is less immediately concerned, as, for instance, quarrels as to which of two unions shall do a certain work. Instances of this kind the papers have frequently given. Refusal to handle materials made in shops objectionable to the union is yet another cause for disagreement. In all these cases the employer has to deal with the



Business Agent. Both have the sense of power. The agent knows that if his grievance is plausible and he gets the support of the Building-Trades Council, he can completely tie up the business of the contractor, not only on the job under dispute, but on every job belonging to the contractor. If it is a matter of plumbing, for instance, the tying up of this work means the stopping of all work that other contractors have to do on the building. This naturally causes great irritation until the matter is settled with the original contractor.

This great power in the hands of the Business Agent tempts abuse, unless there are effective checks. Theoretically the constitution of the Building-Trades Council, composed of delegates from the various unions, before whom every grievance should come for decision, gives a sufficiently large representation of varied interests for a thoroughly circumspect consideration. But just here the weakness of the present system appears. The Board of Business Agents has grown to be the Building-Trades Council, and instead of being checked in a healthy manner by the latter organization, it sways the latter's decisions.

Reasonable demands made by the employers that the Building-Trades Council compel the individual unions to live up to their agreements, have been silently neglected, or met by the answer that a settlement satisfactory to the offending union will also be satisfactory to the Building-Trades Council. Many of the petty annoyances, as well as unreasonable positions that have characterized the dealings of the Business Agents, would have been averted, if the men at the head of the Council had been men of sufficient coolness and forethought duly to weigh the contending interests.

This is the first time that this whole organization has been put to a severe test. Its mistakes in the past have exposed its most vulnerable points. But if it survives—and even if it is broken down, the necessity for its existence will last as long as there are two independent unions—experience will teach it to reorganize a stronger central body, in closer touch with the men

in the individual unions, and to restrict the power of the Business Agent, whose professional position tempts him to arrogance and self-seeking.

## IV.

It seems hardly satisfactory to regard as the only reason for the present strife between the two councils the fact that they exist. It seems almost too sanguine for the contractor to hope that he can break down the present labor organizations; for he will have to do this permanently to destroy the Building-Trades Council. Doubtless the present friction is intolerable; but the enormous financial issue involved would certainly prove a sufficient stimulus to find a less costly remedy. The persistent refusal of the contractors to accept mediation or advice—both private and public—would indicate that other more obscure interests are acting in the same direction.

During the past year there has been a rapid and, from the "cost-of-production" theory inexplicable, rise in the price of building materials. The following quotations give a pointed illustration view of this increase:

## PRICES OF STRUCTURAL IRON.

Prices in 1898	Prices in 1899	Increase (per cent.)
Beams, 18 inches and over....\$1.55	Beams, 18 inches and over...\$2.50	161
Beams, 15 inches and under... 1.45	Beams, 15 inches and under.. 2.40	165
Zees ..... 1.45	Zees ..... 2.40	165
Angles over 6 in. x 6 in..... 1.55	Angles over 6 in. x 6 in..... 2.50	161
Angles under 6 in. x 6 in..... 1.45	Angles under 6 in. x 6 in.... 2.40	165
Plates at ..... 1.90	Plates at..... 3.15	165

## GALVANIZED WROUGHT IRON PIPE.

Cost per foot in 1898	Cost per foot in 1899	Increase (per cent.)
Size No. 1..... 2½ cents	Corresponding size..... 8 cents	320
Size No. 2..... 2¾	Corresponding size..... 8½	309
Size No. 3..... 3¼	Corresponding size..... 9½	292
Size No. 4..... 5¼	Corresponding size..... 13	247
Size No. 5..... 6¾	Corresponding size..... 18	266
Size No. 6..... 8	Corresponding size..... 22	275
Size No. 7..... 11¾	Corresponding size..... 24½	220
Size No. 8..... 34¼	Corresponding size..... 87½	261

## BATH TUBS.

Cost in 1899	Cost of corresponding size in 1900	Increase (per cent.)
\$16.25	\$21.00	129
19.00	29.00	152
21.00	30.00	143
23.50	33.00	136

Building stone cost in 1898, \$7.50 per cord; in 1899, \$12.50.

Plumbers' brass goods have advanced during the same time an average of 25 per cent. The cost of labor used in the manufacture of the above articles has, on an average, not increased by as much as 10 per cent.

This enormous increase, built on an artificial basis, must lead slowly but surely to a break in prices within these classes of goods. The contractor's profit during the last year has been seriously reduced on account of the high cost of materials. Low prices are, of course, not equivalent to high profits; on the contrary, it is in times of prosperity, when prices are fair and business and work plenty, that the contractor has a chance to make his profits. But when prices are forced up, wholly on a speculative basis, the general public, although willing to invest, will refuse estimates based upon these prices.

Here the shrewd entrepreneur will forecast the future. If the indications are that these feverish prices have reached a climax or are near it, he will endeavor to postpone his business operations until he can make his calculations on a reduced price level. If he can precipitate this crisis by causing a shock to the market, his reputation for sagacity does not suffer. No better way to attain both of these ends could be found than to paralyze the business altogether by a general labor blockade. A strike is a sufficient excuse to postpone contracts, and it tends to cause a panic on the market. That speculations of this kind influenced the action of the Building Contractors' Council can, of course, not be proved. That it would have been reasonable for them to do so, later developments would indicate.

The action of J. W. Gates, of the American Steel and Wire Company, goes to confirm this theory. Compare also the following price quotations from the *Iron Age*, April 26, 1900.

## A COMPARISON OF PRICES.

At date, one week, one month, and one year previous.

Advances over the previous month in **Heavy Type**. Declines in *Italics*.

	April 25, 1900	April 18, 1900	March 28, 1900	April 26, 1899
<b>PIG IRON:</b>				
Foundry Pig No. 2, Standard, Philadelphia .....	\$21.75	\$21.75	\$21.75	\$15.75
Foundry Pig No. 2, Southern, Cincinnati .....	20.00	20.25	20.25	14.50
Foundry Pig No. 2, Local, Chicago .....	23.00	23.50	23.50	15.50
Bessemer Pig, Pittsburg .....	24.50	24.50	24.90	15.00
Gray Forge, Pittsburg .....	20.00	20.00	21.00	14.50
Lake Superior Charcoal, Chicago .....	25.50	25.50	25.50	17.00
<b>BILLETS, RAILS, ETC.:</b>				
Steel Billets, Pittsburg .....	31.00	32.00	33.00	25.50
Steel Billets, Philadelphia .....	nom	nom	35.50	28.00
Steel Billets, Chicago .....	nom	nom	nom	25.50
Wire Rods, Pittsburg .....	nom	55.00	nom	32.00
Steel Rails, Heavy, Eastern Mill .....	35.00	35.00	35.00	25.00
Spikes, Tidewater .....	2.60	2.60	2.60	1.70
Splice Bars, Tidewater .....	2.20	2.20	2.60	1.40
<b>OLD MATERIAL:</b>				
O. Steel Rails, Chicago .....	17.50	18.00	18.00	11.50
O. Steel Rails, Philadelphia .....	22.00	23.00	23.50	14.50
O. Iron Rails, Chicago .....	21.00	22.00	22.00	18.00
O. Iron Rails, Philadelphia .....	24.00	24.00	25.00	18.00
O. Car Wheels, Chicago .....	24.00	24.00	24.00	15.00
O. Car Wheels, Philadelphia .....	23.00	23.00	22.00	15.00
Heavy Steel Scrap, Chicago .....	10.00	17.00	17.00	10.00
<b>FINISHED IRON AND STEEL:</b>				
Refined Iron Bars, Philadelphia .....	2.00	2.00	2.15	1.50
Common Iron Bars, Youngstown .....	2.00	2.00	2.15	1.50
Steel Bars, Tidewater .....	2.15	2.15	2.50	1.75
Steel Bars, Pittsburg .....	2.00	2.00	2.25	1.65
Tank Plates, Tidewater .....	2.00	2.00	2.05	2.20
Tank Plates, Pittsburg .....	1.80	1.90	2.00	2.10
Beams, Tidewater .....	2.40	2.40	2.40	1.65
Beams, Pittsburg .....	2.25	2.25	2.25	1.50
Angles, Tidewater .....	2.40	2.40	2.40	1.70
Angles, Pittsburg .....	2.25	2.25	3.25	1.50
Skelp, Grooved Iron, Pittsburg .....	1.90	1.95	1.97½	1.65
Skelp, Sheared Iron, Pittsburg .....	1.90	2.10	2.10	1.90
Sheets, No. 27, Chicago .....	3.35	3.30	3.20	2.90
Sheets, No. 27, Pittsburg .....	3.15	3.10	3.00	2.50
Barb Wire, f.o.b., Pittsburg .....	2.80	3.80	3.80	2.70
Wire Nails, f.o.b., Pittsburg .....	2.20	3.20	3.20	2.10
Cut Nails, Mill .....	2.50	2.50	2.50	1.65

A COMPARISON OF PRICES.—*Continued.*

	April 25, 1900	April 18, 1900	March 28, 1900	April 26, 1899
<b>METALS:</b>				
Copper, New York .....	17.00	17.00	16.80	19.25
Spelter, St. Louis .....	4.50	4.65	4.37 ½	6.50
Lead, New York .....	4.70	4.70	4.70	4.30
Lead, St. Louis .....	4.55	4.55	4.57 ½	4.17 ½
Tin, New York .....	30.00	31.25	31.50	25.30
Antimony, Hallett, New York .....	9.75	9.75	9.75	10.00
Nickel, New York .....	42.00	38.00	38.00	38.00
Tin Plate, Domestic, Bessemer, 100 lbs. New York .....	4.84	4.84	4.84	4.05

To the same effect is an editorial entitled "Prosperity and Strikes" which appeared on May 5, 1900, in the *Commercial and Financial Chronicle*:

High prices have a stimulating effect at certain times and on certain branches of industry, but at other times and in other lines of trade their effect may be disorganizing. The striking laborers in the building trades at Chicago and elsewhere have already learned this fact. They presented a bold front and made large demands, believing that the builders would have to yield. Instead of this they found the leaders so cramped already by the rise of 100 per cent. or more in the cost of materials that they were either glad of a valid excuse to revoke their contracts, or else were forced to refuse by the certainty of loss if their calculations of labor cost were upset. This is the simple explanation for the continuance of the strike in the building trades. The contractors really cannot afford to yield, as, if they could afford it, there would be no inducement to do so. Rightly or wrongly, the builders have believed that a considerable reduction in the price of their materials was at hand. The Steel and Wire Company, purchase of whose product enters directly into the cost of building operations, has already set the example. There was nothing, under such circumstances, to alarm the contractors in the prospect of a temporary forced interruption of business; the laborers simply played into the hands of their employers. Even in New York City, where there has been no general strike, the number of buildings begun in the first quarter of 1900, by the official record, was 754 less than in 1899, with an estimated cost reduced by \$20,032,000.

Under these circumstances it will pay the contractor, who has a large capital to carry him over, to protract the struggle till the inevitable collapse in prices of materials takes place. The small contractor who depends on his daily earnings, but who has

allied his interests to those of the larger contractor to break down the opposition to reduction in the cost of labor power, will naturally suffer keenly, and to him a protracted struggle means financial ruin. But on that hangs another tale.

In speaking to a contractor whose grasp of the business situation and long experience in his branch of business would entitle him to a hearing, the situation was outlined in this way: A large share of the building business in Chicago is done by the small contractors, whose capital enables them to hire only a few men. Though individually each does but a small business, yet their great number makes the aggregate profit considerable. But the tendency towards concentration is as strong in this industry as elsewhere. It is the large capitalist with better opportunities who wants to swallow the small fry. Consequently there is a fight not only between the contractor and the laborer, but also between the big contractor and the small one. But these who have to superintend and personally take part in the job have not the time nor the opportunity to meet for discussion of trade matters nor to get a broad, intelligent view of their common interests. Many of them are opposed to trade unions, because the high wages draw such a large share from the returns. Consequently they have been driven into the contractor's council by the impending struggle. This long cessation of work will be the financial ruin of many. Yet the outcome would be the same anyway, my informant added with a sigh, for the small contractor is bound to go.

If we may be allowed to make a few reflections in the concluding paragraphs of this exposition, something may be said as to the manner in which this fight has been carried on. One must admire the way in which the men have stood together unflinchingly for what they consider their rights. But one must condemn the excess of zeal which leads men to have recourse to physical force and bodily violence, such as have figured altogether too frequently in this controversy. One may even sympathize with the provocation which induces strikers to resort to violence,

but, apart from all question as to the honesty or justice of such a course, experience has taught that violence without the sanction of law never can bring any benefits to those who resort to it. If there is a sufficient number of non union men to take the places of the strikers, the strike must be lost. If there is an insufficient number, it is unnecessary to antagonize public opinion and give welcome weapons into the hands of the party attacked. In the latter case a persistent refusal to work is the only necessary and feasible policy.

This leads up to the relation of the Building-Trades Council, as a factor in politics, to the civic authorities. It is a notorious fact that this large labor organization has played an important part in city politics. This labor vote must be catered to by admitting some of their leaders to city jobs. The administration is "friendly to labor." This feeling is, of course, very laudable when it finds legitimate expression. But when an excited body of men knows that its excesses will be winked at and its lawlessness shielded, it is not apt to restrain its passions.

The actual lawlessness may not be as great as the newspapers try to make out, but the time is likely to come when the public, frightened by the continual stories of violence and riot, will believe the representations of the employers, that mob rule is threatening, and will yield to the cry for drastic measures. If violence had been prevented by a firm attitude at the first symptoms of lawlessness, it would not have been repeated, and the administration would have been saved the necessity of trying to impress the public by imposing police parades, soldiers, guns, and other like paraphernalia.

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## THE POOLING OF RAILWAY FREIGHT CARS.

DURING the past ten years railway consolidation has been more rapid than at any other period. This was caused primarily by growing competition and demoralization of rates, accompanied with increased cost and decreased margin of profit. While the cost of moving traffic has decreased because of the introduction of hitherto unknown economies, the cost of maintenance per road-mile has increased. The net results do not compare favorably with those of twenty-five or thirty years ago, since the decreased cost of transportation does not offset the increased cost of improved service, such as fast freight, fine trains of parlor, library, and buffet cars, and the more important reduction in rates of over 50 per cent. The following figures make a comparison which tells its own story :

Year	First-class rates from Indianapolis, Ind.			Car		Average load	
	Boston	New York	Buffalo	Capacity.	Length	Tons	% of capacity of car
1868	\$1.70	\$1.60	.85	20,000	27 feet	8½	85
1900	.76½	.69½	.44	{ 50,000 100,000	33 to 50 feet	14	47

There are in North America approximately 1,250,000 freight cars owned by railway companies. For years these have not earned enough (in car mileage) to pay a fair interest on the investment (about 650 million dollars), and to provide for depreciation and maintenance.

Attempts to secure greater economy of service have been made. Much money and energy have been spent in introducing and operating the system of rating trains on a tonnage basis. This has brought about good results and will accomplish more, but not all the leaks have yet been stopped. Every year the railways spend millions of dollars which are lost sight of. One of the principal causes of light loads, expensive switching



at large terminals and empty mileage, has been overlooked. That is, *the handling of foreign cars in accordance with initials, marking of cars, or ownership.*

In 1896 I spent considerable time investigating the loss to railroads caused by cars lying idle at junction points, and by transferring and switching because owners did not wish cars to go beyond their own line. The loss of revenue and the expense of transfer exceed 25 million dollars. I believe even a larger amount is wasted every year because of the system of handling cars by ownership.

To the uninitiated a parallel case can best be shown by supposing A loans B two one dollar notes of specific numbers or marks and requires the same identical bills returned in payment of the loan. That is what railways have done for thirty years and are doing today. There is not a road today in any section of the country that has not seen a time when it was short of cars, while some distant or non-connecting road has had a surplus of the same class of cars. They might just as well not be in existence for all the good they do the road that needs them, as there is no means, under present methods, of utilizing them.

A shipper often unloads a car and has ready a load to send out needing the same kind of car as the one which he has at hand and empty. But he must wait until this car is removed and another, differing only in initials or ownership, is received. A reform in this matter would evidently benefit the shipper as well as the carrier.

"What are we to do about it?" has been asked time and again. Plan after plan has been suggested. A few have been tried and abandoned, and railroads continue to build cars, notwithstanding the fact that the number of cars, or the tonnage carrying capacity, is 25 per cent. greater than is necessary to handle the largest business ever moved by the railroads.

The straight per-diem system, pure and simple, would no doubt greatly increase the performance of cars, but even this will not decrease, and may increase, the expense of moving the cars, if they continue to be handled according to ownership or initials.

No plan, in my mind, will ever accomplish a maximum performance with a minimum number of cars until some scheme is devised whereby the borrower or user and the owner participate in the loss or profit involved in the movement of, or delay to, the cars.

Under present conditions A may hold B's cars for prospective loading. It costs A nothing, but B loses the use of the cars and the revenue they might be earning on his own line. If A were a joint owner of the cars, would they be delayed in this manner? We think not. Again, if A has on his line as many cars belonging to B as B has of A's, each has to keep a record, thus making double work and double accounting. Under a co-operative plan each would report to owners the full amount of earnings, which both, being part owners, would endeavor to make as large as possible. The expense of tracing, duplicate records, etc., would be saved.

Every restriction placed on a car retards its movement or availability for service. The fast-freight-line marks that used to predominate are nearly discarded, because they prevented the fullest use of cars. Using the language of the Car Accountants' Association at its Cleveland meeting in 1896:

From the standpoint of car supply, it restricts the availability for the general business of the country, as there is only *one* route by which a line car can properly be sent home. The requirement that cars bearing certain line marks must be selected for loading *via* a particular route makes it necessary to do a great deal of switching to obtain the proper cars, and often results in a great deal of empty haulage to get them to the point of loading. . . .

It is evident that any restrictions upon car movements that will cause unnecessary switching and delay will also reduce the average daily performance of cars, thereby requiring a greater number to handle a given tonnage. The more restrictions *of any kind* that are put upon cars, the less service they can be made to yield, because of the greater resistance they offer to the prompt handling of traffic.

The same authority gives further reasons for eliminating such marks:

1. The cars would be more available for general loading, and could be applied on orders *via any line or route*.

2. The switching service would be curtailed, the proportions of empty handling reduced, and delays to cars shortened. (Hence increased tonnage hauled.)

3. The average daily performance of cars would be increased; the business of all lines would be handled with greater facility and fewer cars. As line marks restrict, so does any route or ownership marking.

A similar opinion, expressed in a paper on "*Per Diem versus Present Practice*," read at the meeting of the Central Association of Operating Officials at St. Louis, in July 1899, states :

One of the additional recommendations of the per diem plan is that it will eventually lead to the pooling of freight equipment, which would be a blessing indeed, for on every division of a railroad, almost every day, you will find empty cars moving in both directions for no other reason than that certain foreign cars that happen to be at a certain terminal, or on a certain division, cannot be loaded in the desired direction, because such loading would be a misuse of the cars, and they must therefore be exchanged with other empties at some other terminal or division of the same system, and many thousands of dollars are unnecessarily spent annually by the roads in this country under this practice.

A number of other authorities confirm this view. Thus one of our prominent general superintendents says : "The saving in cost of handling of equipment would be incalculable." The president of one of the largest Chicago lines, in writing to the president of one of the Vanderbilt lines says : "I believe there is more money to be saved in this way than in any other." The Eastern Association of Car Service Officers, in 1897, passed the following resolution :

*Resolved*, That a general distributing office or clearing house with subsidiary bureaus be established for the purpose of regulating and increasing the supply of cars between railroads to meet legitimate demands of traffic.

Under the present system many factors unite to decrease revenue and to increase expenses. These are :

1. Idle equipment at certain periods on some lines while the same class of cars is needed in other sections of the country.
2. The hauling of empty cars of the same class in contrary directions on account of route or initials.

3. The large amount spent annually to switch certain empties out of sidings, houses, etc., and to switch similar cars back a few minutes later to load out *via* lines other than those owning the empties switched out.
4. Unnecessary switching to get some particular car out of a long string of empties to fill some specific order, when the first car on siding is exactly the same kind of car, only of other initials, than the one desired.
5. The expense of traveling car agents, tracing clerks, stationery, postage, telegraphing, etc.
6. Loss of earnings from cars idle, at junction and other points, awaiting transfer or in process of transfer, to save mileage, or at owner's request.

On the other hand, co-operation or common ownership would secure the following advantages :

1. Increased performance of all cars, which means a maximum business with a given number of cars.
2. No building, for several years to come, of any new equipment save to replace cars destroyed.
3. Decrease in empty and foreign mileage.
4. Saving in switching and terminal expenses.
5. Reduction in train mileage.
6. Increased earnings from greater supply of cars.
7. Decrease in expenses of inspectors, repair shops, material, maintenance of way, car repairs, wheelage or trackage expenses, clerical work, telegraphing and stationery.

To secure these desired ends I would make the following recommendations :

Pool box cars 33 feet to under 40 feet, inside length, as those sizes handle the maximum amount of traffic and are used a greater portion of the year on all lines.

Assign to each class of cars a letter, as outlined in my address before the Central Association of Car Service Officers in annual convention at Toledo, Ohio, July 1896, and before the St. Louis Railway Club, St. Louis, Mo., August 1898, said letter to be first initial on car, thus :

- A— Common box car.
- B— Furniture car.
- C— Ventilated box car.
- D— Refrigerator car.
- E— Single deck stock car.
- F— Feed and water stock cars, etc., etc.

Indicate length by another letter, giving it second position, thus :

- A— Under 33 feet.
- B— 33 to under 34 feet.
- C— 34 to under 35 feet.
- D— 35 to under 36 feet.
- E— 36 to under 37 feet.
- F— 37 to under 38 feet.
- G— 38 to under 39 feet, etc., etc.

Show the capacity of car in the same manner, by a third letter, thus :

- A— Under 40,000 pounds.
- B— 40,000 to 50,000 pounds.
- C— 50,000 to 60,000 pounds.
- D— 60,000 to 70,000 pounds.
- E— 70,000 to 80,000 pounds.
- F— 80,000 to 90,000 pounds.
- G— 90,000 pounds, etc., etc.

Example : A box car 36 feet 9 inches inside length, 60,000 pounds capacity, now marked "C. M. & St. P., 39514" — new plan "A E D 5002."

Abolish all car initials, except those indicating class, length and capacity of car. Individual ownership or identity can be retained if necessary by giving each road consecutive numbers, and stencilling on each end, under the running board "C. M. & St. P. Ry. Co., owners," or, "Southern Pacific Co., lessors."

There are, approximately, 350,000 box cars 33 feet to under 40 feet in length. There should be organized an equipment company to operate the cars for the owners; each owner taking stock in the company in proportion to the value of its cars, determined by the master car builder's rules or by valuation.

There should be established a general or central office with district offices and managers; each road to handle its own distribution as at present.

The basis of charging for use of cars at present is far from satisfactory. I would suggest graduated rates, as follows :

IF ON MILES RUN, PER-TON CAPACITY.

Size	Rate per 10 tons	30 ton car	35 ton car	40 ton car	Under 20 ton cars
33 feet - - -	2.0 mills	6.0 mills	5.0 mills	4.0 mills	3.0 mills
34 feet - - -	2.0 mills	6.0 mills	5.0 mills	4.0 mills	3.0 mills
35 feet - - -	2.1 mills	6.3 mills	5.25 mills	4.2 mills	3.15 mills
36 feet - - -	2.2 mills	6.6 mills	5.5 mills	4.4 mills	3.3 mills
37 feet - - -	2.3 mills	6.9 mills	5.75 mills	4.6 mills	3.45 mills
38 feet - - -	2.4 mills	7.2 mills	6.0 mills	4.8 mills	3.60 mills
39 feet - - -	2.5 mills	7.5 mills	6.25 mills	5.0 mills	3.75 mills

IF ON PER-DIEM, PER-TON CAPACITY.

Size	Rate per 10 tons	30 ton car	35 ton car	40 ton car	Under 20 ton cars
33 feet - - -	6 cents	18 cents	15 cents	12 cents	9 cents
34 feet - - -	6½ cents	19 cents	16 cents	13 cents	10 cents
35 feet - - -	6¾ cents	20 cents	17 cents	14 cents	11 cents
36 feet - - -	7 cents	21 cents	18 cents	15 cents	12 cents
37 feet - - -	7½ cents	22 cents	19 cents	16 cents	13 cents
38 feet - - -	7¾ cents	23 cents	20 cents	17 cents	14 cents
39 feet - - -	8 cents	24 cents	21 cents	18 cents	15 cents

Such graduated compensation, in addition to the justice of the plan, would be an incentive to roads to use only such cars as they needed to handle the business.

Car repairs could be pooled also and based on proportion of mileage, or per diem, under master car builder's rules of lines interested. This would certainly mean earlier uniformity of standards.

Who can estimate the saving in stationery, labor, etc., which would result? The present multiplicity of initials would be reduced to a very small number; it would be unnecessary to consult equipment lists to learn the kind, capacity, or length of cars. In ordering cars, where we now say "50 C., B. & Q., 30-foot, 30-ton box cars, 30 C., M. & St. P. 30-ton, 34-foot box cars," the new scheme would merely order "100 A C D cars."

J. R. CAVANAGH.

INDIANAPOLIS.

## THE HOUSING OF THE POOR IN CHICAGO.

THE development of a small military outpost and trading station, containing in 1830 but sixty inhabitants, into the Chicago of 1900 with its population of 1,750,000<sup>1</sup> is a striking example of the world-wide modern tendency to urban development. Urban conditions are of the first importance, since a constantly larger percentage of the world's population is subject to them. The economic world weakens or grows strong with the city, since it is become the wealth-producing center; and if the conditions of life in it are such as to sap the vitality of workingmen—to weaken their determination and energy in producing wealth, the economic life of the state has been dealt a serious blow.

The workingman's ability to produce is measured by his physical and mental condition, which in turn depends upon his food and environments, and it is especially in regard to the latter that investigation finds him living below a healthful status. Kings, governments, were for centuries blind to the economic value of the health of the laborer and his condition became worse and worse as urban supplanted rural life; but as scientific data concerning the various aspects of economic life became known, it was made clear that to ignore bad sanitary conditions of living was suicidal to the state. One after the other, great cities have expended vast sums to undo the errors of negligence in their upbuilding, in order that the economic waste brought about thereby might be arrested and in time overcome. It has been estimated "that the average shortening of life connected with great poverty . . . is from ten to fifteen years,"<sup>2</sup> and as great poverty always entails bad housing, it is legitimate to ascribe a large part of the time lost to the state to this cause.

Chicago, with a rigorous faith in herself as the favored of the gods, is loth to believe that she has a housing problem; and in the absence of a tenement-house census the task of convincing her is, indeed, a difficult one. To the individual investigator the case admits of no doubt. He has his own data, as well as that of the various societies at work among the poor, to reinforce the evidence of his eyes, but when he endeavors to arrange his conclusions scientifically, he realizes the

<sup>1</sup>Bureau of Vital Statistics February 1900.

<sup>2</sup>J. S. BILLINGS, *Public Health and Municipal Government*.

disadvantage of his position. A tenement-house census would relieve the situation and conserve the energy now spent in explanation and persuasion, applying it to practical remedies for the diagnosed conditions. Such a census should carefully list every tenement, giving its status as to sanitary construction, light, ventilation, height of building, and superficial area of the lot covered. The rental of each building should also be given. Every occupant of the tenements should be listed with particulars as to age, sex, occupation and wages. The number of occupants per dwelling and room and per cubic air space should be given. The mortality returns should be carefully classified according to the density of population in the area considered, the height of buildings and the general sanitary condition of those buildings. Such a census would ultimately solve the housing problem in Chicago, for the city has every opportunity, both of nature and of grace, for becoming a model city; of nature, because the prairie about her offers unlimited space; of grace, because her people are wide-awake and enterprising. The results of the unsanitary housing of the poor once understood, capitalists will vie with one another in the erection of model tenements in Chicago.

It has been so in other large cities. In Berlin, for instance, comparatively little was done to remedy the evils attendant upon unsanitary housing, until the Census of 1880 was published. Then a new code of building regulations was framed, with stringent provisions as to percentage of lot to be covered, and the cubic air space to be allowed each occupant, the ventilation, lighting, and heating of houses, and other important requirements. Mortality returns were so classified in this census as to furnish a complete commentary on proper housing, and the density of the population was compared, in every case with the height of the building and the amount of unbuilt space on the lot.<sup>1</sup>

In the absence of such a tenement-house census in Chicago, the data here presented are drawn mainly from the *Seventh Special Report of the United States Commissioner of Labor* (known as the "Slum Report"), from the facts gathered by the Improved Housing Association of Chicago (as yet unpublished), and from my own personal investigations. While no claim is made that these data are accurately scientific, it is yet certain that they are not misleading. To this the reports of the Board of Health sufficiently testify.

<sup>1</sup>See SHAW, *Municipal Government in Continental Europe*, p. 356.



The district covered by the Slum Report is small in area, but typical of the entire tenement-house section of the city. Starting from the corner of Polk and Halsted streets, the boundary line runs along Halsted to Taylor street, along Taylor to Newberry avenue, along Newberry avenue to Twelfth, along Twelfth to State, along State to Polk, and along Polk to the starting point. In this area, comprising about one third of a square mile, 18,048 persons live, making an average of 54,144 to the square mile, while the average for the entire city is only 6850 to the square mile.<sup>1</sup> There is an average of 15.51 persons to a dwelling, over against an average in New York of 36.79 persons. Males outnumber females, and married persons, unmarried. Of the slum population 57.51 per cent. is foreign-born, a considerable increase over the per cent. for the entire city, which is 40.98 per cent. Of the 57.51 per cent., Italians make up 16.73 per cent., Austro-Hungarians 10.64 per cent., Russians 10.42 per cent., the Poles, Germans and Irish, 6.65, 4.75, and 4.46 per cent. respectively, while British America, Great Britain, France, Norway and Sweden, China, The Netherlands, Spain, and Portugal furnish the remainder of the population, the per cent. for each ranging from .99 to .01 per cent. In comparing the per cent. of foreign born for Chicago as a whole and for her slum district, the fact that there is a great difference in race predominancy in the two should be noted. In the city as a whole, the Germans, Irish, and Scandanavians predominate, the per cent. of each being respectively 14.64, 6.37, and 5.90, while in the slum district these shrink to 4.75, 4.46, and .18 per cent respectively, while the Italians, Austro-Hungarians, and Russians, from .52, 3 and .70 per cent. in Chicago as a whole, rise in the slum district to 16.73, 10.64, and 10.42 per cent. respectively, as already quoted. The political aspect of the housing problem insistently obtrudes itself at this point; 50.62 of the city's voters are foreign-born, and in the slum district 61.31 per cent.

Table XXIX of the Slum Report shows an average of 1.37 persons to a room in Chicago, where New York has 1.88, Baltimore 1.19, and Philadelphia 1.47. Whether this average is too low only an accurate census of the entire tenement district can show. The individual investigator would, I think, incline to put it higher—perhaps unduly influenced by the aggravated cases of over-crowding coming under his notice. For instance, the Improved Housing Association of Chicago have in their possession the photograph of a one room

<sup>1</sup> See SHAW, *op. cit.*, p. 84.

rear tenement on Pacific avenue, which shelters a family of eleven—man, wife, and nine children—and also the photograph described in the *Report of the Department of Health*,<sup>1</sup> which shows a two-story house, the upper floor sheltering fourteen Italian men and one woman.\* Awaiting the complete census, it is better, however, to be conservative and to hesitate to draw any conclusions from what may prove to be isolated cases. There is a disposition, it is to be feared, on the part of some of the most faithful and self-sacrificing workers on the housing problem to make their pictures of actual conditions all shadow. It were a more scientific, and consequently a more successful method in the long run, dispassionately to present the slums as they are—not hopeless, although sorely needing municipal attention.

In this connection it will be in place to state that the poor in Chicago are housed better than in many of the larger cities. The overcrowding is not so bad and the general sanitary conditions are much better, for instance, than in New York. How could it be otherwise? Nature has set bounds to the expansion of the latter city, while Chicago need recognize no limit. Then, too, the extreme youth of Chicago precludes the possibility of her possessing at this time many of New York's peculiar problems. That these problems are, some of them, in process of formation in Chicago cannot be doubted, but if she can be awakened to her need, time and opportunity are hers to avoid the tortuous and expensive method of procedure by which New York is advancing to model conditions in the housing of her poor. Chicago's opportunity of rebuilding on a model central plan after the fire of 1871 was shamelessly neglected, and this as well as future generations must reap the evils resulting from a haphazard system of laying out streets and of building houses. If she could have borrowed a little of the constructive genius of the French, the best architects of the world might have then planned an ideal city. The needs of coming generations would have been carefully considered, and wise provision would have been made, before the price of land had risen, for parks and breathing-spaces, not only in the suburbs, but in what from natural situation must necessarily have become the tenement-house district.

But to return to actual conditions. In the Slum Report we find inside and outside sanitary conditions classified under four heads, excellent, good, fair and bad. As to light and air, ventilation and cleanliness, the greater number of houses rank only fair to good, and

<sup>1</sup> For 1895 and 1896, p. 69.

\* The lower floor is used as a barn.

a large number are listed as bad. The outside conditions are reported bad for the majority of inspections. In respect to both these items New York ranks higher than Chicago, her grade for inside conditions being good for the greater number, and for outside conditions fair. While the report is indefinite because of the impossibility of an accurate definition of the terms used, the tendency shown cannot be doubted. An investigator soon finds that the state of the streets are an index to the inside conditions of the houses situated upon them. My own investigations emphasize the almost universal unsanitary condition of privies and water closets, which means an unavoidable lowering of health from the dissemination of disease germs and the general contamination of the air arising from such a condition. The fact that the conditions noted during the period of investigation were not unusual, was shown by the utter apathy of the tenants themselves in regard to it. There is no doubt that experience had left them ignorant as to even normal sanitary conditions. It was very common to find a water-closet or privy, declared by the tenant to be in a good condition, in a state of indescribable filth. And this in the face of Section 1917 of the Revised Municipal Code, which requires

That every person who shall be the owner, lessee, keeper or manager of any tenement-house, boarding-house, lodging-house or manufactory, shall provide or cause to be provided for the accommodation thereof and for the use of the tenants, lodgers, boarders and workers thereat, adequate privies or water-closets, and the same shall be so adequately ventilated, and shall at all times be kept in such cleanly and wholesome condition as not to be offensive, or to be dangerous or detrimental to health. And no offensive smell or gases from or through any outlet or sewer, or through any such privy or water-closet, shall be allowed by any person aforesaid to pass into such house or any part thereof, or into any other house or building.

Nothing but a thorough official investigation and constant inspection can make possible the enforcement of this and other equally important and flagrantly violated sections of the Sanitary Code. With the present inadequate force of inspectors such control is impossible. In the latest published report of the Department of Health,<sup>2</sup> the assistant commissioner says:

It is entirely feasible to remove and repress the disease-and-death-producing conditions of the Nineteenth Ward, as well as of other wards where like conditions exist. But it cannot be done by surface-skimming and scratching,

<sup>2</sup> 1897.

or by the intermittent irruption of a handful of street and alley cleaners, or by the necessarily infrequent visits of one of the ten sanitary inspectors of the Health Department.

It is true that the Sanitary Code is far from perfect, but as long as the apathy of the city accepts such inadequate provision for the execution of its laws it is useless to ask for a fuller or better code. Compared with the sanitary-inspection force of Glasgow, for instance, with its 800,000 inhabitants, Chicago with her population of 1,750,000 seems merely playing with the enforcement of sanitary law. One hundred and fifty competent inspectors under an able chief make good laws effective in the former city, and preserve the city's economic force, the value of which far outweighs the expense necessary to maintain so large a body of men.

Building, in the tenement wards of Chicago, shows three distinct types.. First, there is the small wooden building erected on the front of the lot, the remaining space allowing an abundance of light and air. This type is held by many to be the least injurious economically, but the fact is overlooked that such houses are for the most part wholly without sanitary contrivances. Open sewers and door-yard cess-pools go in almost every case with such buildings. In many parts of the cities the building itself is below grade, violating, when used as a dwelling, Sec. 1919<sup>1</sup> of the Sanitary Code, interpreted by Sec. 1938,<sup>2</sup> or, when the lower story is used as a barn, as it is, *e. g.*, at 121 Law street, and in many other places, Sec. 1928.<sup>3</sup>

But as land-values rise, the small wooden building is not allowed to monopolize the entire lot. Sometimes, as in a typical block bounded by Kramer, Union, Halsted, and Maxwell streets, another frame building is erected in the rear; but usually the first frame building is relegated to the rear and a larger building, constructed of brick, takes its place. At Pratt and Sangamon streets may be seen an entire

<sup>1</sup>"That no person having the right and power to prevent the same, shall knowingly cause or permit any person to sleep or remain in any cellar," etc.

<sup>2</sup>"A cellar shall be taken to mean and include every basement or lower story of any building or house of which one-half or more of the height from the floor to the ceiling is below the level of the street adjoining."

<sup>3</sup>"Every tenement or lodging-house shall have the proper and suitable conveniences or receptacles for receiving garbage and other refuse matter. No tenement or lodging-house, nor any portion thereof, shall be used as a place of storage for any combustible article, or any article dangerous or detrimental to health, nor shall any horse, cow, calf, swine, pig, sheep, or goat be kept in such house."

block without separating alley, and without any appreciable space left uncovered by the small wooden buildings, four or five deep, extending from street to street. In answer to the question, Why do workmen strike? a writer said recently<sup>1</sup>: "When a man has to live year in and year out on a dirty, narrow apology for a street in a row of wooden or brick or stone tenements begrimed with smoke and soot, divided into little boxes of rooms into which his family must be huddled . . . he is not apt to look on the bright side of life." His wages are apt to "go over the counter in the corner saloon," and Sunday becomes a day in which to brood over his hard luck, and to plan "on the street corners or in some common resort" the strikes which cost the state more than can be estimated.

The third and final type, toward which all tenement building tends, is the long narrow brick structure of varying height, but which covers all or nearly all of the lot. This type is not yet common, although increasing constantly, and is seldom or never as high as similar structures in other cities, notably in New York. Numbers 186-188 Polk street is one of the largest in the tenement district in Chicago, containing forty tenements, and occupied mostly by Bohemians. Another at 82 Wilson street contains seven tenements, a meat market, a Jewish synagogue, and five sweat-shops. From the rear window of the top story sweat-shop in this building an excellent view of block after block of closely built tenements is obtainable, and suggests the thought that if Chicago stubbornly insists on attending the school of experience she may in time be compelled to do as Glasgow did in 1870—destroy 10,000 houses by process of law.<sup>2</sup>

The first type time will remove. It only remains for the city to see to it that its life is not menacingly prolonged, especially when it assumes the rôle of rear tenement, and so passes into the second class. But if the first two types are to be neglected, let there be no dallying with the third type, for it imperils the very life of the city.

It is the new buildings now in process of construction which should be most closely watched. In all parts of the city the law is being broken in respect to provisions for light and air, and in regard to the unoccupied space required between front and rear tenements. Article 236, Section 1 of the Revised Statutes of the State of Illinois provides that in any incorporated city of 50,000 inhabitants all plans for new

<sup>1</sup> *Times-Herald*, April 29, 1900.

<sup>2</sup> M. T. REYNOLDS, *The Housing of the Poor in American Cities*.

buildings shall be submitted to the health commissioner for his approval. Either this is not done in Chicago, or the health commissioner neglects the enforcement of the law.

Section 1933 of the Revised Municipal Code of Chicago provides that

It shall not be lawful hereafter to erect for, or convert to the purpose of a tenement or lodging-house, a building on the front of any lot where there is another building on the rear of the same lot, unless there is a clear, open space exclusively belonging thereto, and extending upward from the ground of at least ten feet between said buildings, if they are one story high above the level of the ground; if they are two stories high, the distance between them shall not be less than fifteen feet; if they are three stories high the distance between them shall be twenty feet; and if they are more than three stories high, the distance between them shall be twenty-five feet.

There are many violations of this ordinance scattered through the tenement wards. At 110-112 Brown street (formerly West Sangamon) two four-story buildings occupy a lot 50 X 100 feet and the only space uncovered is twelve feet between the front and rear tenement. Here an enforcement of existing law would have curtailed over-crowding.

But no provision exists against solid covering of the building lot, such as may be seen at 82 Wilson street, already mentioned.<sup>1</sup> Such buildings may be fairly well lighted as long as contiguous property is not built upon to the same extent, but ultimately they are bound to become both dark and ill-ventilated. It is generally conceded that ideal building is not possible on the ordinary city lot averaging twenty-five feet or less of frontage, but at least unsanitary conditions will be mitigated if Chicago and other cities follow New York in passing a law providing that not more than 65 per cent. of the lot shall be covered. New York, indeed, unwisely added some provisions concerning corner lots, and the permitting of discretionary powers to the superintendent of buildings, which takes away the full force of the law, nevertheless its existence shows a healthy tendency. 65 per cent. should be the rigid maximum, however. It is absurd to enter the provision, as the New York law does, that "where the light and ventilation . . . are, in the opinion of the superintendent of buildings, materially improved, he may permit . . . a tenement or lodging-house to occupy an area not exceeding 75 per centum of the said lot." Such provisions but open the way to bribery and political corruption. There is no need to lead officials into temptation.

<sup>1</sup> P. 360 above.

The condition of streets and alleys is a legitimate factor in the housing problem since, as has already been stated,<sup>2</sup> their condition is reflected in that of the houses. A most lamentable state of filth and an almost entire absence of paving characterize the streets and alleys of the tenement wards in Chicago. Where paving has been done, it has been generally of cedar blocks, and, no regular system of inspection existing, as soon as by accident or by wearing away, a break has been made and a single block loosened, the paving becomes a supply of fuel for the neighborhood. It is not uncommon to see women carrying away apronfuls of these blocks. Thus, through a misapprehension of municipal economy, public taxes are wasted, and the streets are rendered almost useless as thoroughfares. During certain seasons of the year it is not uncommon to see, along the worst streets, an almost continuous line of wagons stuck in the mire. Dr. Reilly, in his report as Assistant Commissioner of Health,<sup>3</sup> places the condition of the streets and alleys first in analyzing the causes of the tenement-region excess of sickness and mortality, especially as to zymotic diseases. His second reason<sup>3</sup> is only the first recapitulated, since street elevation and drainage at this period of the growth of the city would, of course, be included in any paving scheme. The character of the habitation comes next, and that of the population next. These two also cannot be separated. It is quite impossible to present exact statistical data on the subject, but a careful study of model dwellings and their care will convince anyone that, while the character of tenants may not be due, in the sense of a first cause, to bad dwellings, their characters may be transformed, from an economic standpoint at least, by good ones. It is true that the lowest grade of tenement dwellers know nothing of decent living, and there are instances where sanitary contrivances have been removed because the use was totally misunderstood; but good municipal housing presupposes systematic inspection, and, in the case of large tenements, a resident janitor. The state undertakes for its own protection to teach these people civil law utterly foreign to their instincts and habits of living, and it must do no less in regard to decent living, if it would save for its own use human life in sufficient vigor to be of economic value to it.

In the report mentioned, Dr. Reilly points out that in the Sixth, Eighth, Fourteenth, Sixteenth, Seventeenth, Nineteenth, Twenty-first,

<sup>2</sup> P. 358, above.

<sup>3</sup> *Biennial Report Department of Health* (1895 and 1896).

<sup>3</sup> The character of the natural site.

Twenty-sixth, Twenty-eighth, and Thirty-third Wards the records of the Bureau of Vital Statistics "show an excess of death rate, ranging from 6 to 26 per cent. higher than the average death rate of the entire city." Comparing these with the ten best wards, regarded from the health standpoint, namely, the Third, Fourth, Tenth, Eleventh, Thirteenth, Twenty-third, Twenty-fourth, Twenty-fifth, Thirty-second, and Thirty-fourth, he finds that their death-rate average is 80 per cent. higher; "while the difference between the most healthful ward, the Twenty-fourth, and the most unhealthful, the Thirty-third, is 364 per cent., or over three and a half times more in the Thirty-third Ward than in the Twenty-fourth, per 1000 of population.

Is it any wonder that, realizing as they are best able to, the fearful preventable waste arising from bad housing, the department officials should point out how impossible it is for them to deal effectually with disease under present conditions and with their limited force of inspectors? Dr. Reilly says further: "Chicago is in urgent need of modern tenement houses, such as other municipalities have found it to their advantage to establish. They have proved to be the best agencies for reducing death rates, as well as for checking the growth of discontent."

He is also in favor of expropriation, in regard to which he says:

It would be a sanitary measure of the greatest value and of far-reaching influence if the city would exercise the right of expropriation for this purpose [of erecting model tenements] so that public-spirited citizens might form improved dwellings associations similar to those in New York, Boston, Philadelphia, and elsewhere, for the establishment of better and cheaper homes for wage-earners. These enterprises pay, not only financially, but in the elevation of the character of the tenants, the improvement of their habits and modes of life, their greater working efficiency resulting from better health and their higher value as citizens.

The opinions of those having to do with the housing problem in Chicago, especially of those who come officially in contact with it, is of unusual importance, and must be quoted more fully by anyone writing on the subject than would be necessary if there were official statistics upon it. These men cannot be mistaken as to the general aspect of the case, although they may be unable to bring detailed proof of the truth of their deductions.

Mr. George T. Nesmith, a graduate student of Northwestern University, took up residence at the Northwestern University Settlement last



October for the purpose of studying the conditions in the Sixteenth Ward. His figures, like all those compiled by the various associations and by individual investigators, of course lack the accuracy that might be desired. As has been said repeatedly, scientific conclusions on the housing problem of Chicago must wait on an official tenement-house census. But his work has evidently been prosecuted in a scientific spirit, with none of the reformer's zeal in presenting bad, isolated cases as typical. His conclusions give the Sixteenth Ward a strategic position in the campaign against over-crowding, and the evils attendant upon unsanitary housing. From data furnished by the health department he has compiled some interesting tables of comparison between the Sixteenth Ward and its near but differently envired neighbor, the Twenty-second, and the entire city. By his courtesy I am enabled to quote these tables from his unpublished manuscript :

Population of ward [Sixteenth]	70,154
Total deaths from all causes	1,205
Death rate per 1000 of population	17.03
" " " " " of city	14.57
" " " " " Twenty-second Ward	11.65
Per cent. greater than city	16
" " " Twenty-second Ward	46
Population from 1 to 5 yrs. [Sixteenth Ward]	11,750
Total deaths " " " " "	249
" death-rate per 1000 from 1 to 5 yrs.	21.19
" " " " " in city	20.76
" " " " " " " " " Twenty-second Ward	9.08
Per cent. greater than city	2
" " " Twenty-second Ward	121
Population under 1 yr. of age [Sixteenth Ward]	2,608
Total deaths " " " " "	365
" death-rate per 1000 under 1 yr. for Sixteenth Ward	139.57
" " " " " " " city	118.77
" " " " " " " " " Twenty-second Ward	89.64
Per cent. greater in ward than in city	18
" " " " " " " " " Twenty-second Ward	56
Ratio of deaths from 1 to 5 yrs. to total deaths	20.7
" " " " " " " " " in city	13.1
" " " " " " " " " " " " " Twenty-second W'd	11.7
" " " " " under 1 yr. to total deaths [Sixteenth Ward]	30.2

Ratio of deaths from under 1 yr. to total deaths in city . . . .	21.6
"    "    "    "    "    "    "    "    "    "    Twenty-second Ward . . . .	14.6
Per cent. greater in ratio of deaths from 1 to 5 yrs. to total deaths	
than in city . . . . .	58
"    "    Twenty-second Ward . . . . .	77
Per cent. greater in ratio of deaths under 1 yr. to all than in city . .	40
"    than in Twenty-second Ward . . . . .	107

Mr. Nesmith calls especial attention to the mortality of infants, since according to Dr. Reynolds<sup>1</sup> that is the true test of sanitation. The same authority states<sup>2</sup> that acute intestinal diseases to which the largest proportion of the infant mortality quoted is due can be traced directly to bad housing.

The Improved Housing Association of Chicago in its investigations during the past winter made an attempt to cover a considerable larger area than that dealt with in the Slum Report. They selected three congested districts, the North Side one being bounded roughly on the north by Center avenue, on the east by Wells street, on the south by Indiana street, on the west by the river. This district is slightly under two square miles in area. The northwest district is bounded on the north by North avenue, on the east by the Chicago River, on the south Kinzie street, and on the west by an uneven line varying from Wood street to Ashland avenue. Its area is one and one half square miles. The third district, the southwest, is bounded on the north by Van Buren street, east by the factory and railroad districts between and the Chicago River, south by West Twenty-second street, and west by Blue Island and Center avenues. Its area is one and three quarters square miles.<sup>3</sup>

It is to be regretted that the association had neither the time nor a sufficient force of inspectors at their command to make a thorough inspection of these districts. Selected blocks and selected tenements in these blocks were, however, reported upon, and the reports may be relied upon certainly as indicating tendencies. In the entire district Mr. Bissell reports that, while there are some vacant lots and some blocks where factories crowd out tenements, or where stores or railroad tracks fill the space, there is scarcely a block that does not contain front and rear tenements on the same lot.

<sup>1</sup> *Address before Academy of Science*, April 25, 1900.

<sup>2</sup> *Address at Housing Convention*, March 24, 1899.

<sup>3</sup> Boundary taken from Mr. Bissell's report to Improved Housing Association.

Eighteen blocks were covered by the investigation, of which two were in the First Ward, two in the Seventh, three in the Sixteenth, two in the Eighth, one in the Seventeenth, and two in the Nineteenth. Four small blocks in the Stock-yards district and two in Englewood were included. The total number of buildings inspected were fifty-seven.<sup>1</sup>

Of the districts outlined Mr. Bissell states that the southwest is the worst as to general sanitary condition; the northwest next. These two congested districts he says "are steadily passing westward, and will no doubt continue to do so, as they themselves are being crowded by the manufacturing and mercantile interests on the east."

Various tables, maps, etc., summarizing the work of the association, verify the conclusions already stated, showing that the mortality especially from preventable diseases is closely connected with the housing problem. That this problem in Chicago is a serious one and of grave economic purport is in no way disputed, because investigations fail to reveal conditions identical with those in New York or other large cities. The expropriation law, for instance, while needed here to some extent, is not the crying need of the hour as it was at one stage of tenement-house reform, in European cities notably, and in a less degree in New York. What is needed is, first, a census, then a sufficient force of sanitary inspectors, and for their direction and upholding a sanitary code rigid in its requirements and with adequate penalties for disobedience. Thus a system of prevention of the worst tenement-house evils would be put in operation, that would insure an urban development such as an intelligent study of modern economics demand.

The state is losing annually thousands of lives through crime, drunkenness, and disease directly traceable to bad housing. Discontent, the germ of which lies in the home, is recognized by modern penologists as the underlying cause of much wrong-doing, and even fanatics in temperance reform are becoming convinced that the home and not the saloon is responsible for a large part of the drunkenness among the poor, while the statistical reports of the health departments establish undeniably the connection between unsanitary housing and disease. Nor do these last make out the full case of the state *vs.* bad tenements as regards loss of labor. Dr. E. R. L. Gould says\* that

<sup>1</sup> From a summary of the work by Dr. J. E. George for the association.

\*"The Housing Problem," in *Municipal Affairs*, March 1899.

"some years ago the London health authorities instituted inquiries in certain congested neighborhoods to estimate the value of labor lost in a year, not from sickness, but from sheer exhaustion induced by unfavorable surroundings. It was found that, upon the lowest average, every workingman lost about twenty days annually from this cause." One has only to look to see the proof of under-average vitality on the faces of workingmen in the tenement-house districts. It is not claimed that unsanitary housing is the sole cause of this. Bad food and ignorance of the laws of health must be credited with their share of the blame, but, as has already been pointed out,<sup>1</sup> the home is the focal point, and may be used as a means of general uplifting.

Wage and rent problems must also be considered before definite plans for a better housing of the poor can be formulated intelligently. From the summarized table, p. 57, of the Slum Report, the average wage for males and females is found to be \$9.885 per week. The average wage for males is \$10.895 per week. This sum is almost a dollar above the average weekly wage of the largest number of men—2376—who earn only \$9.93 per week, and it is almost a dollar below the weekly wage of the next highest number—2235—who work for \$11.795 per week. The third largest class, of 2014 men, average \$11.03 per week. Of the two smaller classes, 169 receive \$15.305 per week, and 94 only \$4.06. The wage of women does not enter into this comparison, although as a rule the wives and mothers are also wage earners. Many data might be gathered in the slums to prove the absolute necessity of a living wage if the home idea is to be preserved.

The following table (summarized from the Slum Report) will show the average rent paid in the slums :

Weekly rent paid		No. of persons	Per cent.
Under	\$1.00		
		87	2.44
\$1.00 or under	2.00	1,247	34.91
2.00 " "	3.00	1,151	32.22
3.00 " "	4.00	428	11.98
4.00 " "	5.00	120	3.26
5.00 " "	6.00	67	1.88
6.00 " "	7.00	29	.81
7.00 " "	8.00	21	.59
8.00 " "	9.00	15	.42
9.00 " "	10.00	6	.17
10.00 " over		89	2.49
Not specified		312	8.73

<sup>1</sup> P. 366, above.

This table confirms the conclusion reached in my own investigations, viz., that the prevailing rent for rooms is eight to ten dollars per month, and also goes to show that the 20 per cent. apportionment of wages which economists have figured out as belonging to rent, is approximately true. It may be doubted if the wages set down as average, however, could be verified if all deductions were made for unemployed time. Wage statistics, especially when compiled from the testimony of the wage-earners and their families, are apt to reflect the best rather than average conditions, the amount per day or week given being the price at which the laborer values his own efforts, or which he has received near the time at which the report is made. However, the pertinent thing from the present point of view is, accepting the figures, that the slum population is paying the normal rent for housing which reduces its value in the labor market. When the rate of mortality from preventable diseases rises so much higher among the laboring classes than among the well-to-do, it points to conditions of economic loss by no means covered by the item, "death." The poor do not put themselves on the sick list voluntarily. That would too often mean starvation; but impaired vitality does not wait to be listed, showing itself at once on the quality and quantity of the work done. So the state must bear the economic loss of a lessened ability to produce wealth, as well as of the expense involved in the maintenance of hospitals and poorhouses, when disease does not at once annihilate her wealth-producing factors.

Did it not smack too much of political arithmetic it might make a striking showing to calculate from the tables used by assurance companies the actual loss to the state from high mortality among adults, as well as the loss of promised wealth-producing power from a high rate of infant mortality. There would still remain to be calculated the enormous amount of time, and consequently of wealth, lost from ill-health, not forgetting the impaired vitality which is not measured by loss of hours but by the lessened quantity and quality of the work done. Without being tabulated, however, the economic waste from the loss of life or from impaired vitality, is coming to be every year more clearly understood. One may easily assure himself of this fact by a study of the economic conditions of a time no further back than the early decades of the century just closed. A comparison with present conditions shows that the housing, as well as most other economic problems, is infinitesimal now when placed side by side with

those of former times. It is to the advance of the race we owe the clear vision which sees for the first time the economic waste involved in evils moral, spiritual, and physical.

The housing problem, being an economic one, must be solved by economic forces. There is not only no need for philanthropic enterprises in this line, but such enterprises are positively harmful. Neither should the state build homes for the poor. Its duty is to make the way clear for the independent action of the law of supply and demand. This can be done by a refusal to allow false and injurious products to be offered in the housing market. When extraordinary profits can no longer be realized from unsanitary building, capital will gladly take fair dividends from municipally inspected houses.

I have been at some pains to find out what interest owners receive on their investment in the case of some of the worst tenements, Nos. 110-112 Brown street, already described,<sup>1</sup> returns, according to the owner's figures, \$350 per month. Estimating the land at the rather high figure of \$150 per front foot or \$7500, and that the building is worth \$20,000, the owner realizes at least 15 per cent. gross income on his investment. It is expecting more than a knowledge of human nature warrants, to look for a great activity in the building of strictly sanitary tenements when such figures as those just quoted are possible in the case of unsanitary ones.

Dr. Gould has tabulated<sup>2</sup> the dividends paid by forty-nine prominent enterprises, both commercial and semi-philanthropical, in America and Europe, and has thus brought out the fact that commercial enterprises can rely on about 5 per cent. net profits, often more, on buildings constructed on the principles of perfect sanitation. This, in view of the fact that land in congested districts is usually high, is all that can be expected.

The Langdon, a tenement near the Hull House in Chicago, occupied mostly by artisans, and thoroughly model in every respect, pays 6½ per cent. on the investment. Its four-room apartments vary in price from \$12 to \$16, and so are a little beyond the average dweller in that neighborhood.<sup>3</sup> There is this to be said in favor of like buildings for the better class, however, that their removal from the cheaper

<sup>1</sup> P. 361 above.

<sup>2</sup> *Municipal Affairs*, March 1899.

<sup>3</sup> It may very likely occur to the casual observer that too large a proportion of the improved tenement building is done in the interest of that class of tenement-dwellers least needing aids to sanitary living. In a measure the criticism is just, but

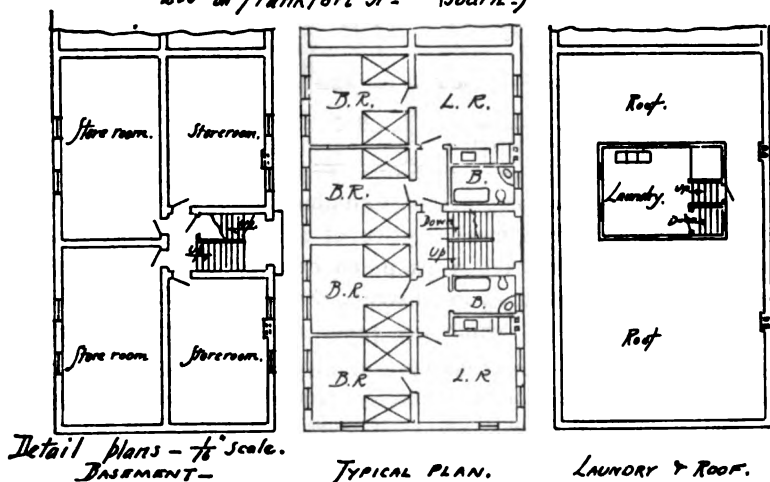
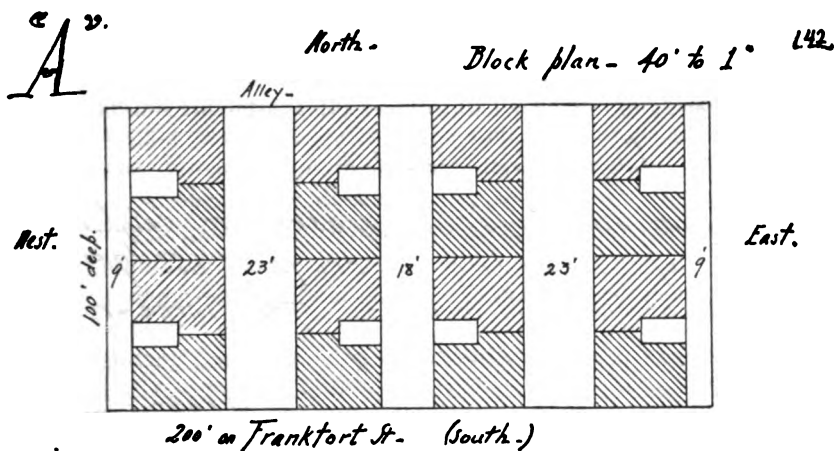
tenements leaves more room for the poorer ones, and so tends to relieve congestion and bring down rents. This is the principle that makes rapid and cheap transit of such interest to the student of the housing problem. It is not that any facilities for reaching suburban homes will depopulate the tenement district, for it is to be feared the time is far distant when a majority of factory workers, for instance, will see it to their interest to live away from their work; but a sufficiently rapid transit to make the suburbs not more than one hour's time distant, and involving an additional expense of not more than five cents per day,<sup>1</sup> will at least decimate the present slum population and reduce the necessary number of stories per building to a more healthful number.

Mr. Dwight Heald Perkins, the architect of "The Langdon," has prepared for Mr. Nesmith\* plans and estimates for model tenements, copies of which, by the courtesy of the latter, I am enabled to present. It will be seen by reference to these that the essentials of sanitary building—light, air, and space—have been amply considered, and the expense still kept at a minimum figure. In parts of the city where the price of land is higher, the buildings would yield a correspondingly lower per cent. unless a story were added. Great stress is often laid on keeping down the height of tenements on the score of congestion, but the evils of tall buildings sanitarily constructed, and covering a limited superficial area of the lot built upon, are so much setting aside the high prices, the character of the lowest slum-dweller is such that landlords would lose all chance of housing the better element if they received them. Nevertheless the effect of such buildings as "The Langdon" is by no means lost on the neighborhood in which it stands. It establishes a standard of living, for one thing, that will make the enforcement of sanitary provisions, when attempted, intelligible, if no more. Again, it will very likely be the agent of a still further advance—cleanliness inside awakening a desire for the better outside environment of the suburbs. When rigid official inspection makes it impossible for owners to furnish or tenants to live in unsanitary dwellings, the law of supply and demand will settle the problem of dwellings built with sufficient simplicity to allow the required low rental.

\*A necessary step toward encouraging workmen to live out of the slums is the establishment of special workmen's trains, to be run during a limited period in the morning and evening, and upon which reduced fares, paid singly or by commutation tickets, will be received. Massachusetts has established such trains, and is the only state so far to do so; but the system is common enough in England, where a daily trip of ten miles and often more, costs the workingman only four cents (*Municipal Affairs*, March 1899). No charity element need enter into such an arrangement, as the increased amount of patronage more than makes up for any lowering of rates.

<sup>1</sup> See pp. 371 and 372.

less than those attendant upon building over the entire lot to a height of even three stories, that I think it better to define no limit of height.\* The law of supply and demand, with the increased transit



Proposed rent for three-room flats, with bath room, running water, basement storerooms, laundry and drying yards on the roofs - \$ 11

Cost of land - - - \$ 4,800 Income (32 flats @ \$11) - - - 4,224

Cost of building - - - 36,000 Maintenance - - - 1,600

\$40,800 Income - - - \$2,624

\* It is not so much a question of how many people there are per acre as it is how they are housed on that acre. An illustration of this is found in the changed character

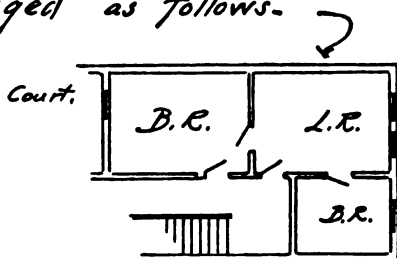


facilities the present century is bound to bring, may be trusted to regulate that.

One point should be emphasized in any comparison of rents. The present tenement house for the poor is absolutely destitute of contrivances for comfort. It is without heat, and sometimes without running water in the individual apartments, almost always without separate water closets, and with no bath-rooms. If apartments similar to the

### *Suggestive Sketch*

*Accommodations at present in neighborhood of Deering average \$6.<sup>00</sup> \$7.<sup>00</sup> or \$8.<sup>00</sup> according to location for three-rooms arranged as follows.*



*3 rooms —  
No heat.  
No plumbing  
except Kitchen.  
sink*

illustration Mr. Perkins has given of accommodations in the neighborhood of Deering have a market price of \$6, \$7, and \$8, the ones built after the plans marked A are much cheaper at from \$7 to \$13. Take the single item of coal, for instance, Mr. Perkins has noted the extravagant rate per ton which the poor pay.<sup>1</sup> This they must be

of the district in London known as the "Boundary street area" (see *Quarterly Journal of Economics*, May 1900). Before the county council took it in hand the extreme poverty and criminality of its inhabitants made it one of the worst slums in London. The old narrow streets have been wiped out, and wide, tree-shaded avenues radiate from a central park. The tenements replacing the small houses two centuries behind in sanitation and comfort were, however, built to a height of five stories, so that 5380 people now live decently and under the best sanitary conditions where the squalor and ill-health of its former 5566 inhabitants called public attention to what, very likely, was thought to be the evils of congestion.

<sup>1</sup> In David Ames Wells's *Theory and Practice of Taxation*, he states that the market price of coal, \$4.50, is augmented to at least \$12 when it is bought by the basketful, the common practice among the poor. See *Sunday Times-Herald*, May 6, 1900.

taught to see is included in their rent in the new model tenements. The supplying of heat also takes away one of the principal objections to living above the second floor. At present the poor carry home their own fuel, and an added flight of stairs is an appreciable hardship, which steam heat would do away with. There is no doubt but that the gas range, with or without the new penny-in-the-slot method of supplying gas, will soon entirely replace the wasteful and inconvenient coal cook-stove or range; and with an abundant supply of hot water both in the individual apartments and in the laundries, the expense for fuel, now one of the dreaded items among the poor, to supply which large demands have been made on charity, will be reduced to an insignificant amount.

The economic necessity of making the poor independent of charity cannot be overestimated. That their manner of living in general, and the unsanitary condition of their dwellings in particular, is largely responsible for the demands now made on philanthropy cannot be doubted. The immense sum of \$79,746,956 is quoted as the charity expenditure in the United States for 1899.<sup>1</sup> It is hardly necessary to point out the economic waste of so large an expenditure for unproductive ends. Add to this the charity distributed by the state in asylums, poorhouses, hospitals, etc., all of which is again unproductive expenditure, which falls on the taxpayer, and the necessity of setting the economic weakling on his feet and of infusing him with a healthy desire as well as the necessary strength to be self-supporting, is seen to be imperative.

In one line alone does there seem to be a necessity for municipal activity in the housing of the poor. That, however, does not call for effort in a new field, but rather for a more economic outlay in a new one. I refer to the establishment of municipal lodging-houses. The conditions at the Harrison street and other police stations of Chicago, where an enforced attempt is made to lodge homeless men, is too well known to require illustration. In November 1895, 11,172 men were lodged at police stations in Chicago. The following month there were 19,697 registered.<sup>2</sup> It becomes a question, then, not whether the city shall take up the lodging question, but how it shall deal with it. Paris has perhaps the best ordered municipal lodging-houses of any large

<sup>1</sup> RAY STANNARD BAKER, in *McClure's Magazine* for May 1900.

<sup>2</sup> JOHN LLOYD THOMAS, *Municipal Affairs*, March 1899.

city. The supervision is strict, aid being given in the search for work,<sup>1</sup> and admission being allowed only for three successive nights. The lodger is also fed, soup being served in the evening and bread in the morning. There are three of these lodging-houses, two for men and one for women. These are cited merely as giving an indication of the lines upon which municipal lodging-houses should be established. By a strict system of registration, the danger of attracting to the city a worthless floating population is avoided, and at the same time such a supervision of those aided is exercised as constantly tends to reduce the list of "out-of-works."

Municipal lodging-houses however are needed only to deal with the class which the police stations now house. The lodging-house proper is as legitimate and as paying an enterprise as the family apartment-house. It is, in fact, the only possible home for the unmarried man of the tenement-region, and for thousands of others who, not properly belonging to this class, have fallen by poverty or misfortune into it. A casual visitor to the ordinary lodging-house in Chicago is impressed first with its dirt, and next with the seemingly low character of its occupants; but a close acquaintance, while it confirms his suspicions in regard to the dirt, makes him aware that here are men whose bad housing is their misfortune rather than their fault. It is from this class that well-kept sanitary lodging-houses, if they existed in Chicago, would receive hearty and paying support. A scheme is now on foot, with Mr. John H. Bogue at its head, to establish a working-men's hotel in Chicago after the plan of the Mill's hotels in New York, which have proved themselves successful. The circular sent

<sup>1</sup> A movement described at length in *The Quarterly Journal of Economics*, May 1900, promises to make employment agencies either wholly or in part municipally managed. Ohio, Montana, New York, Nebraska, Illinois, Missouri, California, Iowa, and Washington, have in the order named, established municipal free employment bureaus. A state law (approved April 11, 1899) provides for their establishment in Illinois in all cities of 50,000 population or over. Chicago has three, one in each division of the city. Incidentally these bureaus accomplish a secondary purpose, their weekly lists, showing the number and character of all applicants for positions and for help, being sent to the Bureau of Labor Statistics, which in turn mail copies of these lists to each state inspector of factories, and each state inspector of mines. These officials are expected to aid in securing employment for applicants. A strike clause, unique to the Illinois law, provides against furnishing laborers to employers whose employees are on a strike. Steps are also taken by the state toward limiting the number and supervising the methods of private agencies, so that it may be hoped that many abuses in this line may now disappear.

out in the interest of this plan states that the proposed building will be fireproof, comprising all the features of a modern hotel, and will have 1130 sleeping rooms or ten floors of 113 rooms each, ranging in size from 6×8 feet to 6×9 feet and a few larger rooms to contain two beds. The prices to be charged will be from 20 cents to 30 cents a night. Each room will contain a bed with mattress, spring, and covering, also a chair and locker or small closet. On each of the sleeping floors will be furnished generous toilet and bath accommodations (baths to be free).<sup>1</sup> The main floor will resemble the ordinary hotel with its office, lounging rooms, etc. There will be no bar. In the basement will be maintained a restaurant, also a laundry and drying-room for the free use of the lodgers. The scheme is in no sense philanthropic, its promoter promising "a safe 6 to 8 per cent. investment, after allowing for all possible contingencies."

There is no reason why several such lodging-houses should not be built in Chicago, an investigation of conditions assuring a paying patronage. As in the case of the family apartment-house, the only aid needed from the city is the enforcement of such sanitary regulations as shall abolish the unsanitary lodging-houses now in existence. Most of the regulations of the Sanitary Code referring to lodging-houses<sup>2</sup> are much too general in character, and, the lack of systematic inspection robs them of what significance they would otherwise possess. In a report before the Merchants' Club of Chicago. Mr. Bogue puts the number of cheap lodging-houses in Chicago at seventy-five, with a capacity of 10,000 men. These he roughly locates "within the central district, bounded on the north by Indiana street, south one and one half miles to 12th street, and from Lake Michigan west to Halsted street, about one mile."

There are three types of lodging-houses in Chicago. The lowest is similar to one on Madison street, the description of which follows, and charges five cents per night. This one furnishes accommodations for over three hundred men, "double deckers," iron bedsteads being ranged along the sides of a large irregularly-shaped room. There is a drawer under each bed for clothing. The bedding is dirty, and the air indescribably foul. The second type is furnished with the same sort of bed, but ranks one step higher because there is a small attempt at privacy, the immense compartment of the first type being cut up into

<sup>1</sup> *Circular.*

<sup>2</sup> See sections 1916, 1917, 1921, 1924, 1928, 1929, 1930, 1931, 1932, 1933, 1934.

small rooms holding about ten beds each. This type often charges ten cents per night's lodging. The third type is the single-room lodging house, so called, the compartments or vestibules being separated from each other by corrugated iron or wooden partitions, covered on top for the most part, by wire netting. The price of lodging in these houses varies from fifteen to twenty-five cents per night. They are of varying degrees of cleanliness, the higher priced being as a rule the best in this regard. The ventilation of these compartments depend generally on the circulation of air obtained from windows at either end of the long room. Sometimes in winter one finds these windows carefully chinked with newspapers and showing no evidence of even occasional opening, but admitting daily airing, as it is impossible for sunshine or even unobstructed air to reach the inside of the compartments, it may be doubted if sanitarily considered, these "vestibuled" lodging-houses are an advance on the large undivided compartment. They certainly do attract a better class of men, since the instinct for privacy characterizes even the remnants of gentlemanliness. The new state lodging-house law enforcing the provision of 400 cubic feet of air per lodger will no doubt do something toward destroying the worst types of lodging-houses, and a healthy competition such as can easily be promoted by the building of sanitarily constructed lodging-houses offering accommodation at the price of the better places of the third type described, is all that is needed to reconstruct that type.

Mr. Bogue says:

From a thorough investigation of this subject, the results are that the lodger in general is trying to improve his surroundings. The higher grade of houses are better patronized, and in order to hold their patronage are obliged to be particular as to the condition of the guests they receive. The great drawback to self improvement is the general condition of the guests they receive.

There is more than the economic side to the lodging-house problem, although that is serious enough to demand immediate solution. It is impossible that men can rise from filthy beds in a room charged with nauseous vapors and, it may be, virulent disease germs, full of energy for the day's task, or with sufficient hopefulness to seek a task if one is not at hand. It is no wonder that these lodging-houses become day-time lounging places for the idle and vicious. Politicians know that in many wards these filthy rooms house the "balance of power." To be sure the men themselves do not share the "boodle"

to any great extent, but the keeper does. Sometimes, indeed, he finds himself not a paid worker so much as a bound slave. Not so long ago that it has been forgotten, one of these lodging-house keepers refused to vote his men according to the will of his "boss." Hired agents caught him alone a few nights after his disobedience, and punished him by a thorough drenching under the hydrant. The victim was so obstinate as to die of pneumonia from the effects of what was probably unaccustomed bathing, and so the effort to reform him proved futile. Strange to say, the newspapers forget to mention the affair, and so the cold-water missionaries were denied fame as well as success.

No license is required for the keeping of a lodging-house in Chicago, and this, coupled with the fact that there is no regular official supervision, makes the lodging-house problem a serious one. As a part of the general housing-problem it must receive attention in time, as the weight of public opinion is fast gathering force for the prevention and cure of evils shown by the experience of all large cities to be attendant on the unsanitary housing of the poor. It must certainly encourage both the isolated worker and the societies formed for the betterment of housing conditions in Chicago that the reward for long and patient agitation of the subject is beginning to appear.<sup>1</sup> Following Herbert Spencer's sage advice, it has not been hard to "show that the productive powers of the laborer will be increased by bettering his health, while the poor's rates will be diminished."<sup>2</sup>

It is not claimed that unsanitary housing is the root of all evil. There are evils, even in the economic world, wholly unconnected with it. A safe method for setting these aside is to deal summarily with the question in hand, and, perfect sanitation of dwellings having been established, to consider the evils then shown to be untouched.

FRANCES BUCKLEY EMBREE.

CHICAGO.

<sup>1</sup> As an evidence of the stirring of public sentiment and the consequent greater activity of officials, attention is called to the late frequent notices in the newspapers of the tearing down of old and unsanitary buildings. Sometimes, indeed, the demolishing crew are a trifle late, as in the case noted in the *Evening Post* for April 26, where an ancient two story frame building at 1712-14 State street, fell down, injuring five persons. Speaking of the incident, Building Commissioner McAndrews says: "This shows how badly the tenement inspection is needed. The inspectors are condemning all such buildings, and when they are very bad, tenants are notified to leave at once, and the fire department set at work removing the dwellings."

<sup>2</sup> *Social Statics and Man vs. the State*, p. 312.

## NOTES.

### PREPARATIONS FOR THE TWELFTH CENSUS.<sup>1</sup>

THE act of March 3, 1899 under which the Twelfth Census of the United States will be taken, contains several innovations from which much is expected for the improvement of the enumeration.

Perhaps the most important of these changes is the division into two classes of the numerous inquiries which from time to time have been imposed upon the American census. Section 7 of the law provides that "the Twelfth Census shall be restricted to inquiries relating to the population, to mortality, to the products of agriculture, and of manufacturing and mechanical establishments." Reports upon these subjects must be published not later than July 1, 1902. But after the publication of these volumes, the director of the census is authorized by section 8 to collect statistics relating to special classes—the insane, feeble minded, deaf, dumb, and blind; to crime, pauperism, and benevolence; to deaths and births in registration areas; to social statistics of cities; to public indebtedness, valuation, taxation, and expenditures; to religious bodies; to electric light and power, telephone and telegraph business, transportation by water, express business and street railways; and to mines, mining, and minerals. Another year is allowed for the preparation of these reports. The primary purpose of Congress in thus dividing the work was probably to ensure a prompt publication of the results of the four main lines of inquiry. For the census office there is the important incidental advantage that, being empowered to defer the special investigations, it can pursue its major work undistracted by a multiplicity of tasks.

This restriction of the subjects of enumeration will also improve the character of the field work by simplifying the duties of the enumerators. In 1890 the enumerators who had to carry with them in making their rounds from ten to thirteen kinds of schedules complained greatly of the complexity of the work and the difficulty of understanding the necessarily elaborate instructions. This year few enumerators will

<sup>1</sup> Much of the material in this note is contained in a paper read before the meeting of the American Economic Association at Ithaca, December 29, 1899, by Professor WALTER F. WILLCOX.

have to carry more than four or five schedules. The population schedule and the brief supplementary schedule relating to persons defective in sight, hearing, or speech must be carried by every enumerator. But the alternative population schedule for reporting Indians will be needed by few except enumerators in Indian Territory and Indian reservations. Moreover as few farms—even in the highly technical sense in which that word is used by the census office<sup>1</sup>—are found in cities, urban enumerators will require few or no agricultural schedules. On the contrary many horses, cows, etc., are kept by persons living in towns and cities and the simple form for reporting their number will be much used in urban districts. In most cities the task of collecting statistics relating to manufacturers requires so much technical skill that it has been entrusted to specially qualified agents. Where this is the case the enumerator will be relieved entirely of the manufacturing schedules. Similarly the reports upon penal institutions have for the most part been put into the hands of some of the officials connected with the institutions. Finally, in those parts of the United States where deaths are registered by state or municipal authorities, the mortality statistics will be taken directly from the records, instead of depending upon the uncertain method of enumeration. Perhaps one third of the population live in such “registration areas.” As his work will thus be less complex than in 1890 it seems reasonable to expect of the enumerator a clearer understanding and more accurate performance of his duties.

While the enumerator's work is thus simplified, his compensation is increased so as to make the appointments attractive to a higher grade of men than were secured in 1890. At the rates of pay then allowed if many men found after undertaking the enumeration of a district that they were unable to earn their customary wages and suspicion arose that some enumerators finding their tasks unprofitable slighted the work in order to finish as soon as possible. This may have led in certain districts to considerable omissions. To prevent a recurrence of this difficulty Congress changed the regulations concerning the compensation of enumerators. While the maximum and minimum rates to be paid are the same as allowed by the act of 1889—2 to 3 cents for every name and 2 to 5 cents for every death reported, 15 to 20 cents

<sup>1</sup>“For census purposes, market, truck, and fruit gardens, orchards, nurseries, cranberry marshes, greenhouses, and city dairies are ‘farms’ provided the entire time of at least one individual is devoted to their care.” *Instructions to Enumerators*, paragraph 272.



for filling out a farm schedule, and 20 to 30 cents for every factory visited—the language of the section has been so modified as to allow the higher rates to be more generally paid. The rates to be given in every district have been fixed after a most careful examination of the time spent and sums earned by the enumerator in 1890. Of course the rates vary as local conditions facilitate or hinder enumeration, but the object has been so to adjust them that a person of average industry and ability may earn three dollars per day of ten hours. It is hoped, consequently, that there will be little disposition to slight the work as unremunerative.

As a further step towards improving the field work the census office has devised a method of testing the fitness of every applicant for appointment as an enumerator. This has been done by means of a "test schedule." Applicants have been sent a printed narrative of facts concerning a number of families such as they might receive in answer to questions asked at the houses in their districts; from the information contained in this narrative they have been required to fill out a blank schedule in accordance with the directions contained in the pamphlet of "Instructions to Enumerators." These schedules were sent to the supervisor of the district and, after the errors were marked, forwarded to Washington. This has given the census office a specimen of the penmanship and mastery of the instructions of every applicant for appointment, and has enabled it to prevent the selection of incompetent candidates.

One other plan for improving the enumeration deserves mention. In taking a census European countries generally count every man in the place where he happens to be at midnight of the day to which the census refers. Under this plan there can be no doubt as to whether any person whom the enumerator finds in his district is to be counted or not, and conversely the enumerator has no concern with any person not in his district at the time the rounds are made. But, in the United States, where the primary purpose of the census as provided for by the Constitution is to furnish a basis for the territorial distribution of Representatives in Congress, every person is counted at his "usual place of abode" whether he happens to be there on June 1 or not. The political reason for this rule is obvious, but, unfortunately, it places many difficulties in the way of an accurate enumeration. The particular danger is that families not in their "usual place of abode" when the enumerator makes his rounds will be omitted. When the

enumerator finds a dwelling vacant, and no one in the neighborhood can answer the census questions regarding the members of the family living there, he must perforce omit them. Nor will the family be reported by any other enumerator, for the man in whose district they happen to be is allowed to count only the habitual residents. Omissions arise in this manner with especial frequency in large cities where many families leave town early and shut up their houses for the summer. In perhaps a score of the cities, where this difficulty is most serious, it will be met by requiring enumerators to keep in a "street book" a record of every house visited. Whenever a vacant dwelling is found any information obtainable as to the name and probable whereabouts of the inmates will be entered. These records will be put in the hands of special agents who will endeavor by correspondence or otherwise to communicate with the members of the family and get from them answers to the census questions. This information will then be entered on the schedules of the proper district. In New York the office has also sent through the mails many thousand cards asking that persons intending to be absent in June state where they may be found. Elsewhere the co-operation of the newspapers will be utilized for a similar purpose, everyone being urged to leave written answers to the questions in case he is likely to be away from his "usual place of abode" at the time of the enumeration.

The accuracy of the census depends primarily upon the faithfulness with which the field work is performed. If the material received by the census office for tabulation is defective, no diligence upon its part can supply the omissions or correct the errors. But excellent material may result in a poor census report if the compilation is unintelligent and the analysis of the tables hasty. A well-trained office force is, therefore, second only in importance to a conscientious enumeration. Much attention has been given to the organization of the central office in Washington, and there seems quite as much reason to anticipate improvement in the compilation and interpretation of the tables as in the character of the field work.

Here, also, the improvements are due in part to Congress and in part to the census administration. To insure more efficient supervision the staff was reorganized by providing for six new officials—an assistant director, who must be "an experienced practical statistician," and five chief statisticians. The salaries attaching to these positions are

four and three thousand dollars. In 1890, the men who had practical direction of the statistical work were the "chiefs of division," at two thousand dollars. Not only does the provision of higher salaries make it easier to obtain men of the requisite qualifications, but the new officials will be less burdened by the minutiae of administration; for the chiefs of staff still remain as the executive officers of the chief statisticians, leaving the latter more leisure for the general direction of the work.

The assistant director, Dr. Frederick H. Wines, who has been connected with the Tenth and Eleventh Censuses, has general charge of the statistical work. The existence of such an office opens the way to a closer co-ordination of the different undertakings of the census than has heretofore been possible. The chief statisticians each preside over a division. The first four have in charge the collection, tabulation, and analysis of the statistics relating to the four main lines of inquiry — population, mortality, agriculture, and manufactures. The fifth division is one of the innovations of the Twelfth Census. It is called the "Division of Methods and Results," and its function is to "study, analyze, and interpret the past experience of the United States, the several states, and foreign countries as expressed mainly in their census volumes," and to "prepare criticisms and summaries stating the results of such experience, and, in the light of it, what is to be looked for as significant in the tables of the Twelfth Census."<sup>1</sup> Professor Walter F. Willcox, of Cornell University, is the chief statistician, and connected with the clerical staff are economic students from the Massachusetts Institute of Technology, Harvard, Columbia, Johns Hopkins, Wisconsin, Chicago, and Stanford.

In the organization of its clerical force the Census Office necessarily labors under great difficulties. It requires for a short time the services of from two thousand to twenty-five hundred clerks. The work they have to perform is peculiar and requires intelligence as well as some training. Not being under the civil-service law, there is some danger that inefficient persons will obtain appointments. As a mode of protection the director was authorized by Congress to examine all applicants for clerical positions. This authorization has been taken advantage of by the appointment of an examiner and the rigid insistence on the rule that no person shall be accepted as a clerk who is unable to pass the prescribed tests. Of course, the examinations have been of a practical nature, the chief purpose being to make certain that all clerks could

<sup>1</sup> WALTER F. WILLCOX, *op. cit.*, p. 17.

write legibly, spell in orthodox fashion, and perform accurately simple arithmetical operations. But even so a very high percentage of applicants is said to have failed of making the requisite averages for passing.

Another change that will materially aid the work of the office is the provision of a building where practically the whole force can be brought under one roof. In 1890 the work of supervision was seriously hampered by the fact that different parts of the work were being carried on in several different buildings, some of them a considerable distance apart. To overcome this difficulty the office, though not authorized to spend any of its appropriation in the construction of a building, succeeded in inducing private capitalists to erect a building for them substantially in accordance with the plans of the assistant director. The characteristic feature of the new building is the two great halls covering over an acre of floor space where the very large force of tabulating clerks can be brought together under a single management.

As in the Eleventh Census, the actual work of tabulation will be performed by the aid of the Hollerith electrical system. This decision was reached after a thorough test of the most prominent rival systems. Its use requires that the information upon the schedules concerning each person reported be transferred to a card about six inches long and three inches wide. This is done by punching holes in the card, the position of every hole standing for some fact—as that the person lives in Chicago, is a male, white, unmarried, twenty-one years of age, father born in Ireland, mother in Massachusetts, able to read and write, a painter by trade, etc. The electrical machines to which the punch cards pass are provided with plates of blunt steel pegs supported by springs. There is a peg for every possible hole. Where a hole has been punched the needle passes through, enters a cup of mercury below, and establishes an electrical current which moves the counter on a connected dial. The readings of these dials after a set of cards has been run through show how many males, females, white persons, colored persons, etc., live in the district to which the cards refer.<sup>1</sup> The use of electricity for the tabulation of census data was perhaps the chief advance made by the Eleventh Census. Since then the Hollerith system has been successfully employed in Austrian and French censuses,

<sup>1</sup>The best description of the Hollerith tabulating system and its use in census work is found in DR. H. RAUCHBERG's article, "Die elektrische Zählmaschine und ihrer Anwendung insbesondere bei der österreichischen Volkszählung," in the *Allgemeines statistisches Archiv*, vol. ii. pp. 78-126. The inventor has described his system in the *Journal of the Royal Statistical Society*, vol. lvii. pp. 678 ff.

and it is at present being used for the censuses of Cuba and Porto Rico taken under the supervision of the War Department.

The shortness of the time allowed for the completion of the reports will probably make it impractical to introduce any very extensive modifications in the method of presentation. Enumeration commences June 1, 1900, and the four volumes dealing with population, mortality, agriculture, and manufactures must, according to the terms of the law, be published by July 1, 1902. Persons having a practical acquaintance with the work of converting the raw material supplied by schedules into finished tables accompanied with explanatory text will appreciate how short a time two years is for the accomplishment of such a task; others may recollect how much more time was consumed by the Eleventh Census in doing the same work. Under the circumstances every effort must be bent to expediting the publication of the four volumes as the law directs. However when this has been accomplished the Census Office may be able to undertake some further analysis of the material in its keeping. How much can be done in this way is of course undetermined as yet; but as one example of the kind of work which the Census Office desires to do may be mentioned the plan to tabulate the data regarding population with the family, instead of the individual, as the unit. Another possibility is the preparation of a special study of age returns with an attempt at their correction. That such work would add greatly to the scientific value of the census, and that to at a comparatively small extra cost, is clear. But for it the public must wait until the regular reports are finished.

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### TRUSTS, THE MARGINAL PRODUCER AND PRICES.

RICARDO is responsible for many theories, orthodox and otherwise, in the realm of Economics. The Socialists drew from his writings the fundamentals of their doctrine of value and the "iron law of wages." Now comes a knight of concentration and declares that the modern combination is helpless to raise prices.<sup>1</sup> The argument for this last statement is Ricardian as will be recognized when developed in the next few sentences. It is as follows: so long as a combination cannot furnish the supply of commodities to meet the demand, the remaining

<sup>1</sup> GEORGE GUNTON in a lecture in New York City, March 3, 1900.

part must be provided by what are called independent producers. If the independent producers manufacture this supply a price sufficient to remunerate them must be paid. No option is left to the consumer in the matter. If the price is not paid the amount is not forthcoming. This statement may be illustrated by reference to two of the larger trusts, the Standard Oil Company and the American Sugar Company. It is said that the two concerns control about 80 per cent. of the commodities, oil and sugar. The remaining twenty is therefore supplied by independent producers. In good years everybody, large and small producers, has an opportunity to sell his products. There is then a large profit for some, a fair one for others, and a still smaller amount for a third group. The difference in each case is limited by the producing ability of each group. When all the producers are needed to furnish the supply wanted by the consumer the latter must pay not what it costs the trusts, but what it costs the man who is producing under the greatest disadvantage. It is this cost which makes the price and, barring freight charges and shipping expenses, is the same throughout the market. If the trust can produce below this cost to the marginal producer it secures a profit which will vary with the ability of the organization to manufacture at a lower cost. The trust, therefore makes a profit because of economies in production and management. This to the mind of the writer is a somewhat perverted use of an old theory.

The marginal producer theory was not advanced at the time of its inception as an explanation of present methods of manufacture and production. It was on the contrary presented as a solution of certain phenomena found in a "freely reproducible goods" society. The question then is on the ability of a so-called trust to raise prices. Perusal of the various trust investigations proves beyond a reasonable doubt the power a combination has over prices. Thus in the report of the Joint Committee of the New York Senate and Assembly appointed to investigate trusts (p. 27), the statement is made that "the 'equality rate plan' of the Sugar Trust permits the combination to fix the price not only of its own product but of all refined sugars of every manufacture absolutely and with mathematical certainty; and the system is refined to such a nicety that prices on the Mississippi must, within one hour, respond to the arbitrary decision of the combination here." The report goes farther and says, "An organization of this kind holds its products at a fixed price without regard to the tendency of prices and in times of depression to maintain an arbitrary and fixed price." The

theory of the marginal producer does not explain adequately the relation of a combination to the question of prices.

Returning to this Ricardian device the natural question rises, what influence does the marginal producer have upon price? I make bold to say that in a so-called "scarcity goods" society, as ours is today, the marginal producer is a resultant of price rather than a determinant of it. General Walker used the theory to explain that profits were in their nature rent. It is well known that profits and rent are price determined and not price determining. The producer gets a profit because he gets within the price. But to day the combination has two policies—lower the expense of producing and raise the price if possible. As soon as the field of production is arbitrarily limited, the theory of the marginal producer does not adequately explain the phenomenon of prices.

The policy of every trust is to maintain a monopoly price which when analyzed appears to be that rate which will sell the largest quantity and bring to the coffers of the organization the greatest income. This is the point toward which any combination under the guidance of a long sighted policy naturally gravitates. But as the price reaches this point, the competitor becomes a member of the combination, and the so-called marginal producer ceases to compete. Where a trust for reasons of its own increases the price, the marginal producer again makes his appearance. He is simply a chip on the tide of production and not the determinant of price. In a "freely reproducible goods society" the marginal producer may have been a factor in determining the price, but today he comes in the market only because the price is high enough for him to do so, and not because the consumer needs an amount which the trust cannot supply if necessary.

General Walker framed the marginal producer theory as clearly as any economist. In one place he says: "The price of manufactured goods of any particular description is determined by the cost of production of that portion of the supply which is produced at the greatest disadvantage."<sup>1</sup> But in another, as though in doubt of such a wide statement, he again says: "But while market price must always measure the utility of the commodity to the last purchaser, that is, the person to whom it is just worth while to buy at that price, market price does not always measure the efforts and abstinence of the last producer, that is the person producing under the greatest disadvantage; to whom, therefore it is only just worth while to produce at that price. It is in this

<sup>1</sup> WALKER, *Political Economy*, p. 240.

latter respect that market price differs from normal price."<sup>1</sup> General Walker is here talking about normal price in a normal market and in a "freely reproducible goods society." These are things that do not now exist as has already been shown. It seems therefore, that there are other factors in the question of price than the marginal producer. In all of this the consumer is hardly recognized as having any part in the determination of prices. May we not say with Mr. Macfarlane, that the utility of the commodity to the producer and consumer sets the limits within which the price is determined.<sup>2</sup> The monopoly strength of the consumer, or the producer then fixes the final price within limits established by the utility of the commodity to the two sides of the market. And in so far as it does settle the price the marginal producer may come within the field of production. A combination with a monopoly position can therefore determine the price within the limits referred to above.

The relation of the trust to price is not then to be settled by a theory made for other times and conditions. We are in a period of monopoly and trust control, the occasion and time demand a new analysis. There is no intention to discuss here the trust as a producing agency. Undoubtedly it has come to stay, but if this be so then an early recognition of the new conditions produced by it, will make the problem easier to solve. The doctrines of a competitive society must be readapted to this later phase of organization.

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### THE INHERITANCE TAX DECISION.

THE decision of the supreme court upon the constitutionality of the inheritance tax imposed by the Internal Revenue law of June 13, 1898, was handed down May 14.<sup>3</sup> The grounds of objection to the

<sup>1</sup> *Ibid.*, p. 101.

<sup>2</sup> C. W. MACFARLANE, *Value and Distribution*, p. 67.

<sup>3</sup> *Knowlton et al. vs. Moore*, October term 1899, No. 387. The text of the law in question is as follows:

SEC. 29. That any person or persons having in charge or trust as administrators, executors, or trustees, any legacies or distributive shares arising from personal property, where the whole amount of such personal property as aforesaid shall exceed the sum of \$10,000 in actual value, passing, after the passage of this act, from any person possessed of such property, either by will or by the intestate laws of any state or territory, or any personal property or interest therein, transferred by deed, grant, bargain, sale, or gift, made or intended to take effect in possession or enjoyment after



law were three: (1) that the impost was a direct tax, and therefore unconstitutional because not apportioned; (2) that the right of inheritance is a creature purely of state law, and hence not subject to the control or regulation of Congress in any manner; (3) that the tax was not uniform, and therefore void. A question was also raised concerning the method of assessing taxes, viz., whether the rate of the tax which a legacy should pay should be determined by the aggregate amount of the personal estate of the deceased, or by the amount of the single legacy. The opinion, delivered by Justice White, discusses all these points exhaustively. It cannot be reproduced *in extenso* because of its length, but the following account presents a summary of the argument with full citations of the most important passages.

The first point dealt with is the power of Congress to levy a tax upon inheritances. Upon this subject the court says:

It is not denied that, subject to a compliance with the limitations in the constitution, the taxing power of Congress extends to all usual objects of taxation. Indeed, as said in the *License Tax Cases* (5 Wall. 462, 471), after referring to the limitations expressed in the Constitution, "Thus limited, and thus only, it (the taxing power of Congress) reaches every subject, and may be exercised at discretion." The limitation which would exclude from Congress the right to tax inheritances and legacies is made to depend upon the contention that as the power to regulate successions is lodged solely in the several states, therefore Congress is without authority to tax the transmission

the death of the grantor or bargainor, to any person or persons, or to any body or bodies, politic or corporate, in trust or otherwise, shall be, and hereby are, made subject to a duty or tax, to be paid to the United States as follows, that is to say: Where the whole amount of said personal property shall exceed in value \$10,000, and shall not exceed in value the sum of \$25,000, the tax shall be—

*First*, Where the person or persons entitled to any beneficial interest in such property shall be the lineal issue or lineal ancestor, brother, or sister to the person who died possessed of such property as aforesaid, at the rate of seventy-five cents for each and every \$100 of the clear value of such interest in such property.

*Second*, Where the person or persons entitled to any beneficial interest in such property shall be the descendant of a brother or sister of the person who died possessed as aforesaid, at the rate of one dollar and fifty cents for each and every \$100 of the clear value of such interest.

*Third*, Where the person or persons entitled to any beneficial interest in such property shall be the brother or sister of the father or mother, or a descendant of a brother or sister of the father or mother, of the persons so died possessed as aforesaid, at the rate of three dollars for each and every \$100 of the clear value of such interest.

*Fourth*, Where the person or persons entitled to any beneficial interest in such property shall be the brother or sister of the grandfather or grandmother, or a

or receipt of property by death. This proposition is supported by a reference to decisions holding that the several states cannot tax or otherwise impose burdens on the exclusive powers of the national government or the instrumentalities employed to carry such powers into execution, and, conversely, that the same limitation rests upon the national government in relation to the powers of the several states. (*Weston vs. Charleston*, 2 Pet. 449; *McCulloch vs. Maryland*, 4 Wheat. 431, 439; *Bank of Commerce vs. New York City*, 2 Black, 620; *Collector vs. Day*, 11 Wall. 124; *United States vs. Railroad Co.*, Wall. 327; *Railroad Co. vs. Peniston*, 18 Wall. 5.)

But the fallacy which underlies the proposition contended for is the assumption that the tax on the transmission or receipt of property occasioned by death is imposed on the exclusive power of the state to regulate the devolution of property upon death. The thing forming the universal subject of taxation upon which inheritance and legacy taxes rest is the transmission or receipt, and not the right existing to regulate. In legal effect, then, the proposition upon which the argument rests is that wherever a right is subject to exclusive regulation, by either the government of the United States on the one hand or the several states on the other, the exercise of such rights as regulated can alone be taxed by the government having the mission to regulate. But when it is accurately stated, the proposition denies the authority of the states to tax objects which are confessedly within the reach of their taxing power, and also excludes the national government from almost every subject of direct and many acknowledged objects of indirect taxation. Thus imports are exclusively within the taxing power of Congress. Can it

descendant of the brother or sister of the grandfather or grandmother, of the person who died possessed as aforesaid, at the rate of four dollars for each and every hundred dollars of the clear value of such interest.

*Fifth*, Where the person or persons entitled to any beneficial interest in such property shall be in any other degree of collateral consanguinity than as hereinbefore stated, or shall be a stranger in blood to the person who died possessed as aforesaid, or shall be a body politic or corporate, at the rate of five dollars for each and every hundred dollars of the clear value of such interest: *Provided*, That all legacies or property passing by will, or by the laws of any state or territory, to husband or wife of the person who died possessed as aforesaid, shall be exempt from tax or duty.

Where the amount or value of said property shall exceed the sum of \$25,000, but shall not exceed the sum or value of \$100,000, the rates of duty or tax above set forth shall be multiplied by one and one-half, and where the amount or value of said property shall exceed the sum of \$100,000, but shall not exceed the sum of \$500,000, such rates of duty shall be multiplied by two; and where the amount or value of said property shall exceed the sum of \$500,000, but shall not exceed the sum of \$1,000,000, such rates of duty shall be multiplied by two and one-half; and where the amount or value of said property shall exceed the sum of \$1,000,000, such rates of duty shall be multiplied by three.

be said that the property when imported and commingled with the goods of the state cannot be taxed, because it had been at some prior time the subject of exclusive regulation by Congress? Again, interstate commerce is often within the exclusive regulating power of Congress. Can it be asserted that the property of all persons or corporations engaged in such commerce is not the subject of taxation by the several states, because Congress may regulate interstate commerce? Conveyances, mortgages, leases, pledges, and, indeed, all property and the contracts which arise from its ownership, are subject more or less to state regulation, exclusive in its nature. If the proposition here contended for be sound, such property or dealings in relation thereto cannot be taxed by Congress, even in the form of a stamp duty. It cannot be doubted that the argument when reduced to its essence demonstrates its own unsoundness, since it leads to the necessary conclusion that both the national and state governments are divested of those powers of taxation which from the foundation of the government admittedly have belonged to them.

Having thus affirmed the power of Congress to lay death duties, the court proceeds to interpret the meaning of the law. At best the phraseology of the act is obscure. The Internal Revenue Office, charged with its administration, took it to mean that the rate of tax upon each legacy was to be determined by the whole value of the personal estate, and this view was sustained by the inferior court. But the supreme court, after an elaborate discussion of the text of the act, and a comparison with the corresponding sections of the inheritance tax law of 1864, reverses this decision, and holds that

The tax is on the passing of legacies or distributive shares of personalty, with a progressive rate on each, separately determined by the sum of each of such legacies or distributive shares.

In discussing the next question, whether a tax on inheritances is a direct tax within the meaning of the Constitution and so subject to apportionment, the court relies upon an elaborate review of the death duties imposed by foreign countries, by the United States, and by the several states of the Union to show

That death duties, generally, have been from the beginning in all countries considered as different from taxes levied on property, real or personal, directly on account of the ownership and possession thereof.

And

That such taxes, almost from the beginning of our national life, have been treated as duties, and not as direct taxes.

The opinion then proceeds :

This legislative and administrative view of such taxes has been directly upheld by this court. In *Scholey vs. Rew* (23 Wall. 349) . . . the question presented was the constitutionality of the provisions of the act of 1864, imposing a succession duty as to real estate. The assertion was that the duty was repugnant to the Constitution, because it was a direct tax and had not been apportioned. The tax was decided to be constitutional. The court said (p. 346):

"But it is clear that the tax or duty levied by the act under consideration is not a direct tax within the meaning of either of these provisions. Instead of that it is plainly an excise tax or duty, authorized by section eight of article one, which vests the power in Congress to lay and collect taxes, duties, imposts, and excises, to pay the debts and provide for the common defense and general welfare.

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"Whether direct taxes in the sense of the Constitution comprehend any other tax than a capitation tax and a tax on land, is a question not absolutely decided, nor is it necessary to determine it in the present case, as it is expressly decided that the term does not include the tax on income, which cannot be distinguished in principle from a succession tax such as the one involved in the present controversy."

This is decisive against the contrary contention here relied on, unless it be that the decision in *Scholey vs. Rew* has been overruled, and therefore is no longer controlling.

The argument is that the decision in *Scholey vs. Rew* was overruled in *Pollock vs. Farmers' Loan & Trust Company* (157 U. S. 429; 158 U. S. 601). This contention is thus supported in argument.

As in the course of the opinion in *Scholey vs. Rew* the court said that taxes on successions could not be distinguished in principle from an income tax, therefore the decision in the Pollock case, which held that an income tax was direct, it is argued, necessarily decided that an inheritance tax was also direct. But in the Pollock case the decision in *Scholey vs. Rew* was not overruled. On the contrary, the correctness of the decision in the latter case as to the particular matter which it actually decided in effect was reaffirmed. In consequence of the statement made in *Scholey vs. Rew*, that an income tax and a succession tax could not be distinguished one from the other, that case was relied on in the Pollock case by counsel in argument and by the members of the court who dissented, as establishing, for the reason stated, that the income tax was not direct. The court, however, treated *Scholey vs. Rew* as inapplicable to an income tax, because it considered that whether an income tax was direct was not actually involved in the latter case, and hence the illustration which was used in *Scholey vs. Rew* as to an income tax was held not to have been a decision on the question of whether or not an income tax was direct.

The court said (157 U. S. 577):

"*Scholey vs. Rew* (23 Wall. 331) was the case of a succession tax, which the court held to be 'plainly an excise tax or duty' upon the devolution of the estate or the right to become beneficially entitled to the same, or the income thereof, in possession or expectancy. It was like the succession tax of a state, held constitutional in *Mager vs. Grima* (8 How. 490); and the distinction between the power of a state and the power of the United States to regulate the succession of property was not referred to, and does not appear to have been in the mind of the court. The opinion stated that the act of Parliament, from which the particular provision under consideration was borrowed, had received substantially the same construction, and cases under that act hold that a succession duty is not a tax upon income or upon property, but on the actual benefit derived by the individual, determined as prescribed. (*In re Elwes*, 3 H. & N. 719; *Attorney General vs. Sefton*, 2 H. & C. 362; *S. C.* (H. L.) 3 H. & C. 1023; 11 H. L. Cas. 257.)"

The argument now made, therefore, comes to this: Although in the Pollock case the doctrine which the court considered as having been actually decided in *Scholey vs. Rew* was not overruled, nevertheless, because an example which was made use of in the course of the opinion in *Scholey vs. Rew* was disregarded, the Pollock case therefore overruled *Scholey vs. Rew*. The issue presented in the Pollock case was whether an income tax was direct within the meaning of the Constitution. The contentions which the case involved were thus presented. On the one hand, it was argued that only capitation taxes and taxes on land as such were direct, within the meaning of the Constitution, considered as a matter of first impressson, and that previous adjudications had construed the Constitution as having that import. On the other hand, it was asserted that, in principle, direct taxes in the constitutional sense, embraced not only taxes on land and capitation taxes, but all burdens laid on real or personal property because of its ownership, which were equivalent to a direct tax on such property, and it was affirmed that the previous adjudications of this court had settled nothing to the contrary. The issues which were thus presented in the Pollock case, it will be observed, had been expressly reserved in *Scholey vs. Rew*, where it was said (23 Wall. 346):

"Whether direct taxes in the sense of the Constitution comprehend any other tax than a capitation tax and a tax on land, is a question not absolutely decided, nor is it necessary to determine it in the present case."

The question which was thus reserved in *Scholey vs. Rew*, and which was presented for decision in the Pollock case, was decided in the latter case, the court holding that taxes on the income of real and personal property were the legal equivalent of a direct levy on the property from which the income was derived, and therefore required apportionment. But there was no

intimation in the Pollock case that inheritance taxes—which had been held in *Scholey vs. Rew* not to be direct, which had from all time been considered as being imposed not on property, real or personal, as ordinarily understood, but as being levied on the transmission or receipt of property occasioned by death, and which had from the foundation of the government been treated as a duty or excise—were direct taxes within the meaning of the Constitution. Undoubtedly, in the course of the opinion in the Pollock case, it was said that, if a tax was direct within the constitutional sense, the mere erroneous qualification of it as an excise or duty would not take it out of the constitutional requirement as to apportionment. But this language related to the subject-matter under consideration, and was but a statement that a tax which was in itself direct, because imposed upon property solely by reason of its ownership, could not be changed by affixing to it the qualification of excise or duty. Here we are asked to decide that a tax is a direct tax on property which has at all times been considered as the antithesis of such a tax; that is, has ever been treated as a duty or excise, because of the particular occasion which gives rise to its levy.

But it is asserted that it was decided in the income tax cases that, in order to determine whether a tax be direct within the meaning of the Constitution, it must be ascertained whether the one upon whom by law the burden of paying it is first cast, can thereafter shift it to another person. If he cannot the tax would then be direct in the constitutional sense, and, hence, however obvious in other respects it might be a duty, impost, or excise, it cannot be levied by the rule of uniformity and must be apportioned. From this assumed premise it is argued that death duties cannot be shifted from the one on whom they are first cast by law, and therefore they are direct taxes requiring apportionment.

The fallacy is in the premise. It is true that in the income tax cases the theory of certain economists by which direct and indirect taxes are classified with reference to the ability to shift the same was adverted to. But this disputable theory was not the basis of the conclusion of the court. The constitutional meaning of the word direct was the matter decided. Considering that the constitutional rule of apportionment had its origin in the purpose to prevent taxes on persons solely because of their general ownership of property from being levied by any other rule than that of apportionment, two things were decided by the court: First, that no sound distinction existed between a tax levied on a person solely because of his general ownership of real property, and the same tax imposed solely because of his general ownership of personal property. Secondly, that the tax on the income derived from such property, real or personal, was the legal equivalent of a direct tax on the property from which said income was derived, and hence must be apportioned. These conclusions, however lend no support to the contention that it was decided that duties, imposts, and excises which are not the essential

equivalent of a tax on property generally, real or personal, solely because of its ownership, must be converted into direct taxes, because it is conceived that it would be demonstrated by a close analysis that they could not be shifted from the person upon whom they first fall.

After thus deciding that "the tax under consideration is not direct within the meaning of the Constitution, but, on the contrary, is a duty or excise," the court takes up the question of its uniformity. The point at issue is thus stated :

The contention is that because the statute exempts legacies and distributive shares in personal property below ten thousand dollars, because it classifies the rate of tax according to the relationship or absence of the relationship of the taker to the deceased, and provides for a rate progressing by the amount of the legacy or share, therefore the tax is repugnant to that portion of the first clause of section 8 of article 1 of the Constitution, which "provides that duties, imposts, and excises shall be uniform throughout the United States."

The opponents of the tax took the ground that the words "uniform throughout the United States" prohibit "the levy of any duty, impost, or excise, which is not intrinsically equal and uniform in its operations upon individuals," while the other side argued that "the power of Congress in levying the taxes in question is, by the terms of the Constitution, restrained only by the requirement that such taxes be geographically uniform."

The decision of the court is in favor of the latter view. It is apparent from a study of the text of the Constitution, says the opinion :

. . . . that if the word "uniform" means "equal and uniform" in the sense now asserted by the opponents of the tax, the words "throughout the United States" are deprived of all real significance, and sustaining the contention must hence lead to a disregard of the elementary canon of construction which requires that effect be given to each word of the Constitution.

Taking a wider view, it is to be remembered that the power to tax contained in section 8 of article 1 is to lay and collect "taxes, duties, imposts, and excises. . . . But all duties, imposts, and excises shall be uniform throughout the United States." Thus, the qualification of uniformity is imposed, not upon all taxes which the Constitution authorizes, but only on duties, imposts, and excises. The conclusion that inherent equality and uniformity is contemplated involves, therefore, the proposition that the rule of intrinsic uniformity is applied by the Constitution to taxation by means of duties, imposts, and excises, and it is not applicable to any other form of taxes. It cannot be doubted that in levying direct taxes, after apportioning the amount among the several states, as provided in clause 4 of section 9 of

article 1 of the Constitution, Congress has the power to choose the objects of direct taxation, and to levy the quota as apportioned directly upon the objects so selected. Even then, if the view of inherent uniformity be the true one, none of the taxes so levied would be subjected to such a rule, as the requirement only relates to duties, imposts, and excises.

But the classes of taxes termed duties, imposts, and excises, to which the rule of uniformity applies, are those to which the principle of equality and uniformity in the sense claimed, is in the nature of things the least applicable and least susceptible of being enforced. Excises usually look to a particular subject, and levy burdens with reference to the act of manufacturing them, selling them, etc. They are or may be as varied in form as are the acts or dealings with which the taxes are concerned. Impost duties take every conceivable form, as may by the legislative authority be deemed best for the general welfare. They have been at all times often specific. They have sometimes been discriminatory, particularly when deemed necessary by reason of the tariff legislation of other countries. The claim of intrinsic uniformity, therefore, imputes to the framers a restriction as to certain forms of taxes, where the restraint was least appropriate and the omission where it was most needed. This discord which the construction, if well founded, would create, suggests at once the unsoundness of the proposition, and gives rise to the inference that the contrary view by which the unity of the provisions of the Constitution is maintained, must be the correct one. In fact, it is apparent that if imposts, duties, and excises are controlled by the rule of intrinsic uniformity, the methods usually employed at the time of the adoption of the Constitution in all countries in the levy of such taxes would have to be abandoned in this country, and, therefore, whilst nominally having the authority to impose taxes of this character, the power to do so would be virtually denied to Congress.

Now, that the requirement that direct taxes should be apportioned among the several states, contemplated the protection of the states, to prevent their being called upon to contribute more than was deemed their due share of the burden, is clear. Giving to the term uniformity as applied to duties, imposts, and excises, a geographical significance, likewise causes that provision to look to the forbidding of discrimination as between the states, by the levying of duties, imposts, or excises upon a particular subject in one state, and a different duty, impost, or excise on the same subject in another; and therefore, as far as may be, is a restriction in the same direction and in harmony with the requirement of apportionment of direct taxes.

This interpretation of the clause is supported by a long review of the practice of taxation under the continental Congress and the discussions of the constitutional convention. “. . . Not a single word,” the court declares; “is found in any of the debates, or in any of the



proceedings or historical documents, contemporaneous and concurrent with the adoption of the Constitution, which give slightest intimation (*sic.*) that any suggestion was ever made that the grant of power to tax was considered from the point of view of its operation upon the individual." It therefore concludes "that the words 'uniform throughout the United States' do not signify an intrinsic, but simply a geographical uniformity."

The last objection to the law with which the opinion deals is the claim that "the progressive rate feature of the statute is so repugnant to fundamental principles of equality and justice that the law should be held to be void, even although it transgresses no express limitation in the Constitution." Upon this head the court says:

Without intimating any opinion as to the existence of a right in the courts to exercise the power which is thus invoked, it is apparent that the argument as to the enormity of the tax is without merit. It was disposed of in *Magoun vs. Illinois Trust & Savings Bank* (170 U. S. 293).

The review which we have made exhibits the fact that taxes imposed with reference to the ability of the person upon whom the burden is placed to bear the same have been levied from the foundation of the government. So, also, some authoritative thinkers, and a number of economic writers, contend that a progressive tax is more just and equal than a proportional one. In the absence of constitutional limitation, the question whether it is or is not is legislative and not judicial. The grave consequences which it is asserted must arise in the future if the right to levy a progressive tax be recognized involves in its ultimate aspect the mere assertion that free and representative government is a failure, and that the grossest abuses of power are foreshadowed unless the courts usurp a purely legislative function. If a case should ever arise, where an arbitrary and confiscatory exaction is imposed bearing the guise of a progressive or any other form of tax, it will be time enough to consider whether the judicial power can afford a remedy by applying inherent and fundamental principles for the protection of the individual, even though there be no express authority in the Constitution to do so. That the law which we have construed affords no ground for the contention that the tax imposed is arbitrary and confiscatory, is obvious.

On the same day that the above decision was rendered, the court handed down two opinions sustaining the validity of the inheritance tax, even when imposed upon legacies consisting of United States bonds exempted by the laws under which they were issued from all taxation, national, state, or local. The first case (*Plummer vs. Coler*, No. 489) concerned such a tax levied by a state. The court holds that an inheritance

tax is not a tax upon the property passing by will, but a tax upon the right to succeed to the property. This right is created by state law, and may be made to contribute to the support of the state quite regardless of the nature of the property which passes. In the second case (*Murdoch vs. Ward*, No. 458) this decision is applied to the federal inheritance tax. "If a state inheritance law," says the opinion; "can validly impose a tax measured by the amount or value of the legacy, even if that amount includes United States bonds, the reasoning that justified such a conclusion must, when applied to the case of a Federal inheritance law taxing the very same legacy, bring us to the same conclusion."

WESLEY C. MITCHELL.

### A CRITIC OF ANTHROPO-SOCIOLOGY.

IN the February number of the *Quarterly Journal of Economics* Mr. John Cummings has a strenuous criticism of the work of the group of anthropologists who have ventured, "gratuitously and somewhat ostentatiously," to intrude into the sacred precincts of sociology. Their data and interpretations are consigned "to the same limbo" as astrology, phrenology, and palmistry, with the happy result that "the world of sociologists" — which has been, it seems, "somewhat aghast for the time being" — is "composing itself once more," and "sociology may breathe again naturally."

If a voice might return from the aforesaid limbo, at the risk of disturbing again the peaceful (and perhaps at times audible) breathing of sociology, it might inquire why a sociologist should regard the discovery or assertion of the sociological significance of anthropological data as so distressing. Is sociology conceived as already in the calm eventide of her existence, when having accomplished her work and achieved the position of a complete and rounded science, she may confidently the drowsy curtain of her eyelids draw against any body of pertinent data offered by economics, history, biology, or anthropology? It would seem that such a body of data ought to be regarded as a contribution rather than as a gratuitously disturbing element. There is, rightly considered, no such spirit of antagonism as our author seems to imagine. It is true that "anthropology has been destined by anthropologists" — perhaps a little rashly — "to revolutionize the political and social sciences as radically as bacteriology has revolutionized the science of medicine." Taking the prophecy as it stands, it may be noted that no hostility exists between bacteriology

and the science of medicine which it has revolutionized, and that sociology, which admittedly must be built up largely on the results of subsidiary sciences, need not take it amiss if the progress of any of these compels radical change. But it must be admitted on the part of the anthropologists that their phraseology, as quoted by Mr. Cummings, is a little too much colored by the first enthusiasm of discovery. Still the expression is hardly too strong as regards what must be the ultimate effect of the discoveries of anthro-po-sociology, always with the proviso that the generalizations already reached are confirmed by further investigation.

It is this further investigation which the pioneers have sought — to speak somewhat irreverently — to stir up on the part of individuals or institutions that have the means and prestige to prosecute the researches on a more adequate scale. "If (to quote the first English exposition of the matter) their tone appears somewhat too dogmatic, this is partly because it has seemed best to state the results briefly and positively and in a way that may possibly promote the collection of data which will tend either to confirm or to refute the deductions drawn from those here represented.<sup>1</sup> While the economist and the worker in many branches of social science can draw without labor and without price upon a vast mass of official statistics, the anthro-po-sociologists have had to collect their own data by the slow process of measuring individuals and by the vastly slower process of persuading them one by one to allow themselves to be measured. They have deemed themselves fortunate when they could secure the mere consent of the government to measure army conscripts, and this often under conditions that make the work difficult and unsatisfactory."<sup>2</sup> Under these

<sup>1</sup> *Quarterly Journal of Economics*, January 1896, p. 184.

<sup>2</sup> "The official inspectors must not be retarded in their work as the Ministry of War attaches that condition to permission to view the recruits. Many of those rejected for service are dismissed by the surgeons at a glance, but I must make measurements on all alike. They are sent to my room at the rate of two hundred in three hours, sometimes two hundred and forty; and on all these men I must make many measurements, while rendering instant decision upon the color of the hair and eyes. The mental effort involved in forming so many separate judgments in such quick succession often brings me near fainting at the close of the session."—Otto Ammon.

"Each time I have required the consent of an official, the head of an institution, or a prefect, the favor has been granted grudgingly if not refused altogether. Many investigations have thus been prevented by mere caprice or by the fear of displeasing someone in authority. Others have been broken off when almost complete and an immense amount of work has been thereby rendered useless." Lapouge, *l'Ar्यen* (Paris 1899), p. 448.

conditions Lapouge has measured some 12,000 subjects and Ammon 22,962, subsequently analyzing from various points of view the data thus obtained. Some idea of the labor involved may be formed from the fact that the mere presentation and exposition of Ammon's material and results, with very little discussion of its significance, requires over seven hundred large octavo pages. The results reached by Ammon and Lapouge have been confirmed by the independent researches of a few other investigators and have been formulated in certain generalizations, or, more briefly, "laws," which if correct are of obvious sociological importance. With the co-operation of scientific societies and especially of the sociological departments of the universities, the truth or falsity of these laws could be definitely established. For example, if measurements were taken of the students of French and of German origin in the American universities, we should have an excellent test of the theory that migrants from these countries to America are composed more largely of the dolichocephalic element than are the home populations from which they come. Under these conditions the anthropologists may perhaps be excused for insisting somewhat strongly upon the sociological significance of their investigations.

It need hardly be said that Mr. Cummings's paper is one of great interest, and that the anthropo-sociologists should welcome it gladly, for just such candid criticism is certainly a help toward clearing up difficulties and inconsistencies in the exposition and interpretation of their data. Such inconsistencies as exist have indeed been perceived and elaborated with great astuteness. But the admitted existence of such difficulties does not appear at all to justify the condemnation of the whole science, for no science which deals with the complicated data of human experience is free from them. By the same method of attack, history or economics, not to mention sociology, could be thrown out into the outer darkness where there is the wailing of astrology and palmistry and the gnashing of Coin's Financial School.<sup>1</sup> If political

<sup>1</sup>Without wishing to conceal whatever family skeletons may exist in the closet of anthropo-sociology, I am constrained to dispute the tie of relationship which Mr. Cummings implies in designating our science as "racial phrenology" (p. 211). Anthropology and phrenology both attach significance to the form of the human skull; monetary science and the vagaries of the professional free silver cranks both attach significance to the weight of the silver dollar. There is no real tie of relationship in the first case, any more than in the second. While for the phrenologist the bumps are an alleged direct indication of individual qualities, the form of the head is for the anthropologist evidence of race and so in general of certain racial qualities.

economy has not succeeded in the hundred odd years of its existence as a science in becoming entirely reconciled with itself, it is not to be wondered at that anthropo-sociology has not in the ten years in which its data have been accuulating solved all the difficulties in their interpretation. All that can be expected is that it should seek to explain as consistently as may be all the available data, add to the stock as rapidly as its resources permit, and modify its hypotheses as the new material may require. Its "laws" are not logical principles which must hold without exception, but merely generalizations from empirical data. The immediate service of the preliminary generalizations is to indicate in what direction further investigation should be directed.

While Mr. Cummings's criticisms suggest certain changes in exposition, they do not I think present any valid refutation of the essential results of anthropo-sociology. One or two of his arguments appear to be merely the result of a misleading use of formal logic. Others rest on bare assertion or opinion without proof. Others spring from a misapprehension of the statements and conceptions of the authors criticized. In part this misapprehension is, I venture to think, of our author's own manufacture; but in part it takes its origin in faults of exposition on the part of the anthropo-sociologists, more especially in the necessarily curtailed accounts of the subject where in order to save space for the exposition of new or special data, it has been necessary to condense the more general aspects of the matter into a somewhat crude and dogmatic statement, with too little attention to exceptions and qualifications and without a sufficiently frequent repetition from article to article of necessary cautions and modifications. This fault cannot be urged against the more detailed expositions in the principal works devoted to the subject: Ammon's *Die Natürliche Auslese beim Menschen* (1893) and *Anthropologie der Badener* (1899), and Lapouge's *Les Sélections sociales* (1896) and *l'Aryen* (1899). These works contain indeed taken together a full statement and discussion of practically all of the difficulties upon which Mr. Cummings bases his criticism. But in view of the wrong impression apparently conveyed by some of the shorter articles, I am glad to take this occasion to supplement and in certain respects to correct these cruder expositions of anthropological doctrine. This restatement will incidentally touch upon some of Mr. Cummings's objections. His other arguments can then be considered separately.

I will consider first the matter in which apparently the greatest misapprehension exists, namely, the question of the association of certain traits in individuals. Much of our author's argument seems to rest on the assumption that the anthropologists regard certain traits as constantly and uniformly found in association. Here and there this assumption crops out into definite statement, as when, for example, we are told (p. 96) that the laws of anthropo-sociology "depend upon an *absolute fixity* in relationship between *individual* variation of character and *individual* index." The assumption as thus expressed and as more often tacitly implied colors the whole course of the argument. It is wholly the result of misapprehension of the anthropological doctrine. If the anthropologists held this conception, their case would certainly be a weak one, for their own statistics show clearly that there is no such invariable relation between physical and psychical traits. All that is asserted is a certain tendency toward such association, which tendency will appear if a sufficient number of individuals are brought under observation. For example, the best-attested law of anthropo-sociology is that in populations such as those of France and Germany the more dolichocephalic elements tend to concentrate in the urban centers. This is apparently because the dolichocephalic elements are somewhat more restless or ambitious than the brachycephalic elements. This again is apparently because in the present mixed population the elements into which the old Nordic or Teutonic stock has entered most largely tend to reproduce in combination both its dolichocephaly and its active temperament. But this does not mean at all that every dolichocephalic is more active or migratory than every brachycephalic, any more than the general statement that men are taller than women means that Mr. Smith is necessarily taller than Mrs. Smith. Both the migratory and the sedentary elements of the population will of course consist of dolichocephalic, brachycephalic, and intermediate individuals; but there will be a slight preponderance of dolichocephaly in the migratory group. This is all the fixity of association that could be expected, especially where the population is so thoroughly mixed as in central Europe, and this is all that has been held by the anthropologists to exist. In fact, it is probable that the rule will be found subject to exceptions even where considerable groups are taken in each category; and it is possible even that in certain populations the association between a restless temperament and dolichocephaly may be found to have wholly disappeared as a consequence of long and complete interbreeding.

This by the way, explains in part why the variation in index between the different sociological groups is often so slight as it is actually found to be. What may be called the normal association between index and temperament holds apparently among a majority of the subjects in each category, but the absence of association among others partly neutralizes the effect of the normal cases. Hence the objection sometimes urged that the difference in average index between the sociological categories is usually slight loses its force. Nothing but a slight variation could be expected.

Evidently there is no convincing *a priori* reason why, in the admittedly complex composition of the populations of Europe, correlations between cephalic index and psychic traits should have persisted even in this general sense. If the correlation were asserted simply on theoretical grounds, there would indeed be the probability in its favor that the distinctive mental traits of the Nordic race might be expected to appear more often than otherwise among those of the present population who most nearly reproduce the physical traits and especially the characteristic head form of that race. But the assertion does not rest upon this theoretic probability but upon empirical data gathered without a suspicion that they would yield such a result. When Ammon in making a purely geographical study of the population of Baden, discovered that the urban residents and migrants were more dolichocephalic than the peasantry, no other explanation could be found than that of some correlation between dolichocephaly and the restless spirit that seeks the opportunities of city life. It may be added that no other adequate explanation has yet been offered. Thus the theory grew necessarily from the empirical data, and in fact the so-called laws of anthropo-sociology are only summary statements of the results of such statistics as have been gathered regarding the correlation between psychological and physical characteristics. That there is such a correlation appears to be the only reasonable conclusion from the wide range of anthropological data which have become available, unless indeed the anthropologists have concocted or doctored their statistics, or unless they have been the victims of a most extraordinary series of coincidences all pointing in one direction. Yet Mr. Cummings adopts no one of these alternative explanations, nor does he suggest any of his own. He simply ignores the data and dismisses the whole matter with the opinion that there are "no very good grounds" for accepting "the cephalic index as an index of character" (p. 197-198), and with the

assertion that "the physical earmarks of race have gone one way while the mental attributes of race have gone another" (p. 211). What weight have such expressions of *a priori* opinion against the results of empirical data?

Our critic apparently reaches his conclusion that mental and physical traits have wholly parted company, as in indirect result of the admitted complexity and irregularity of the association in individuals of the physical traits themselves. But in the one case as in the other the question whether there are regular tendencies toward association is one which must be decided from actual data. Even if there were no tendency for association say between tall stature and dolichocephaly, it would not follow that there would be none between dolichocephaly and an active temperament. The available data go to show that this latter tendency toward association exists at least in the various groups of population studied in France and Germany.<sup>1</sup> Mr. Cummings might legitimately argue that the data are insufficient to prove the proposition; but they certainly create a strong presumption in its favor which can only be neutralized by actual evidence on the other side. Mr. Cummings apparently has no such evidence to offer.

This brings us indirectly to the question of the racial composition of the population of Europe. The passage in which our author attacks the conception of race and the analysis of European populations into three or four principal or primary races (pp. 185-194) is apparently the most effective portion of his whole criticism. Its apparent effectiveness comes mainly from two misconceptions. The first is an exaggerated idea of the extent to which the different race types have become lost by interbreeding. The complexity in which the different traits are combined in the existing population is undoubtedly great, but it is not so absolute as Mr. Cummings supposes. The second misapprehension is the assumption that the theory of anthropo-sociology is inconsistent with the complexity of combination that actually exists, that in other

<sup>1</sup> Since the above was in type an important confirmation of the generality of the law has come to hand in the researches of Dr. Andreas M. Hansen in Scandinavia. His *Norsk Folkepsykologi med politisk Kart over Skandinavien* (Kristiania, 1889), shows that the dolichocephalic population groups are distinctly more advanced economically, more progressive politically, and in general more active than the more brachycephalic groups. His conclusions are summarized by Ammon in the *Centralblatt für Anthropologie, Ethnologie und Urgeschichte*, Heft 3, 1900. Some evidence also exists with reference to Switzerland, North Italy, Austria, Russia, and lastly with reference to emigrants from Europe to America.



words the anthropo-sociologists presuppose that the principal races enter without much fusion or confusion, each in relatively pure form, into the existing populations, and that the distinctive race traits appear in uniform combinations.

Both these misapprehensions may be met by a summary restatement of the actual teaching of the anthropo-sociologists. In the first place it should be pointed out that the use of the word race and the corresponding conception is not essential to their theory. If the reader so prefers, he may follow Ammon<sup>1</sup> in the use of the more non-committal word type rather than Lapouge in the use of the term race. No race can, of course, be regarded as pure,<sup>2</sup> but certain ones may be regarded as relatively, or in a sense as practically pure. A race may be distinguished by a combination of characteristics of general prevalence among its members and capable of being transmitted to the great majority of their descendants.<sup>3</sup>

The population of Europe as a whole is extremely mixed, the various physical traits combining in the different population groups in various seemingly irregular ways. The apparent confusion has led some anthropologists to abandon altogether the attempt at racial analysis of that population, and has even brought some of them to regard race as a purely ideal conception. The difficulty can be met by distinguishing between the tolerably pure representatives of the principal races and the great mass of intermediate types who represent no pure race but only a confused mixture.<sup>4</sup>

The determination of the three or four principal primary races of Europe is reached partly by the study of the present population, and partly by the records of the past, literary descriptions, and crania. The principal evidence, briefly stated, is as follows:

The north of Europe is characterized today by the prevalence of blondness, tall stature and dolichocephaly. The data tend to show, further, that these traits are in that region more commonly than otherwise associated in the same individuals, that is, for example, that tall persons are more generally dolichocephalic and of lighter pigmentation

<sup>1</sup> "Die Frage, ob die verschiedenen Gruppen von Menschen wirklich gesonderte Rassen sind, können wir auf sich beruhen lassen; Typen sind sie jedenfalls." *Anthropologie der Badener*, p. 106.

<sup>2</sup> AMMON, *Natürliche Auslese beim Menschen*, p. 1.

LAPOUGE, *Les sélections sociales*, p. 3.

<sup>3</sup> *Les sélections sociales*, p. 7

<sup>4</sup> *Ibid.*

than short persons. The evidence of the skeletons is that the ancient inhabitants of this region were dolichocephalic and relatively tall; the evidence of all literary records is that they were tall and of light pigmentation. Lastly, there is the consideration that the climatic conditions of the region in question have been such as would produce a blond, lymphatic race by the process of climatic selection. We have, then, the evidence of the existence in the north of a tall, blondish, dolichocephalic type. If one grants that individuals of this type are by intermarriage with similar individuals capable of transmitting their distinctive traits to the great majority of their descendants — with more or less allowance, of course, for individual variation, for atavism, etc.—one is justified in regarding them as a race. This race, or type, is variously designated by the terms “Nordic,” “Aryan,” *Homo Europaeus*.

By similar reasoning another great race may be distinguished, also dolichocephalic, but prevailing dark and short, centered mainly in Spain and southern Italy, and designated usually as the Mediterranean type.

The population of central Europe tends in varying degrees toward brachycephaly. This phenomenon is ordinarily attributed to the presence and intermixture in varying proportion of one or more races of brachycephalics, intermediate in pigmentation and stature between the Nordic and the Mediterranean races, and designated as the Alpine type, *Homo Alpinus*. According to one view this race has come from the great center of brachycephaly in Asia.<sup>1</sup> According to another it has developed on the ground by a process of natural or social selection.<sup>2</sup>

From the foregoing it will be seen that the anthropologists do not by any means consider European populations as composed exclusively of the above three races, nor do they imagine that a very large proportion of the population, especially in the central region, represents any one of the types in its pure form. Lapouge estimates roughly, as follows, the number of individuals of the race *Homo Europaeus*, that is to say, those combining relative dolichocephaly, tall stature and light pigmentation, and capable, probably, of transmitting such traits to most of their children: In the United States, 15 millions; in the British Isles, 10 millions; in Russia, 9 millions; in Germany, 6 millions; in

<sup>1</sup> RIPLEY, *Races of Europe*, p. 473; AMMON, *Anthropologie der Badener*, p. 105.

<sup>2</sup> LAPOUGE, *l'Aryen*, pp. 227-235.

Scandinavia, 2.3 millions; in Austria, 1.8 millions; in France, 1.6 millions; in Spanish America, 1.5 millions; in the British colonies, one million; in Holland, 600,000; in Italy, 500,000; in Switzerland, 100,000; in Spain, 100,000; in the rest of the world, 100,000.<sup>1</sup> The number of brachycephalics of relatively pure race in Europe may be put, possibly, at 50 million.<sup>2</sup> "The great majority then of the populations of central Europe are composed of crosses of all degrees" between *Homo Europæus* and the brachycephalics.<sup>3</sup> The irregular combinations of physical traits are admittedly often as numerous as, sometimes more numerous than, the regular combinations. This is partly because the tendency toward the normal combinations is weakened where the intermixture of races has been of early and general occurrence. Another explanation, brought out especially in Professor Ripley's recent work, is that differences in environment and nutrition have so modified stature and perhaps also pigmentation as to overbalance in certain regions the tendency toward the normal combinations. Again, it is possible that the data as to the distribution and association of the different traits may be found to accord better with the hypothesis of four or more races or types instead of three. If, with Deniker and Lapouge, we adopt the recent distinction between two brachycephalic types, one dark and short, constituting the principal element in France, the other relatively tall and (in some combinations) blond, entering largely into the population of Austria, northern Italy, south and east Germany,<sup>4</sup> we may find a solution of many of the apparent inconsistencies in the data for central Europe.

The above is an exposition of the present status of the theory of the ethnic composition of the population of Europe as provisionally held by the anthropo-sociologists, with some merging or compromising of individual differences. I have devoted so much space to the matter rather to correct misapprehensions that may have arisen from previous briefer statements of the theory, than because of its intrinsic importance for anthropo-sociology. It is in fact rather the concern of descriptive anthropology than of the sociological branch of the science. Granted the existence of the Nordic race type, and the theory of anthropo-sociology remains practically undisturbed, whatever changes and refinements may be necessitated in the determination of the brachycephalic and Mediterranean types, and so in the analysis of the

<sup>1</sup> *L'Aryen*, pp. 345-346.    <sup>2</sup> LAPOUGE, *les sélections sociales*, p. 20.    <sup>3</sup> *Ibid.*

<sup>4</sup> Cf. JOURNAL OF POLITICAL ECONOMY, December 1899, pp. 68, 69.

actual population. In fact it is not necessary to grant even that premise, for so long as the accumulating data continue to show a correlation between head-form and mental tendency, we have, independently of any racial interpretation whatever, the basis for the study of the working of social selection as between the dolichocephalic and brachycephalic elements in the population.

It will have been noticed that in the foregoing discussion the cephalic index has been assumed to be both the best single test of race and an indication of psychological tendency. According to Mr. Cummings this double use of the index is wholly unjustifiable and self-destructive. "The cephalic index," he tells us, "may be an index either of ethnic generation or of social selection. It cannot be both. If it is an index of individual capacity and fitness to survive, it cannot be accepted as an index of ethnic generation; and if it is accepted as an index of ethnic generation, it cannot be accepted as an index of individual fitness to survive" (p. 197). This argument is, I think, based on a misleading use of formal logic. If, as tacitly assumed, race and capacity were wholly independent, the cephalic index could not be used as an index of both. But, as the two run parallel, what is an index of one is also an index of the other. The fallacy of Mr. Cummings's argument may best be shown by an illustration. If speaking of the negro as contrasted with the white, he were to affirm: "The color of the skin may be either an indication of race or an indication of ability; it cannot be both," we should at once see the futility of the reasoning. Granted that the negro is, as a race, or if you please, on the average, less capable than the white, the color of his skin, just because it is an indication of his race, is *for that very reason* an indication of his inferiority. In a similar sense a low cephalic index in western Central Europe is an indication of race, or at least of racial affinity, and for that very reason it is an indication of psychological tendency, and so indirectly of relative fitness to survive.

There is, therefore, no inconsistency in Lapouge's use of the cephalic index at once as a basis for distinguishing between the different racial elements and as an indication of temperament, since the temperament being an internal and the index an external manifestation of race, they will tend to appear in a constant relation. It is true that the proportion of dolichocephalic and of brachycephalic elements is regarded as changing through a process of natural or social selection. Thus the anthropo-sociologists have explained the increase of the

brachycephalic type in Europe, on the theory that the dolichocephalics wear themselves out in warfare,<sup>1</sup> in the stress of urban life, and in all kinds of ambitious undertakings, leaving the brachycephalics to multiply under the more normal conditions of rural life. As already noted in another connection, Lapouge is even inclined to trace the origin and spread of the brachycephalics in Europe to a similar selective process. But here again the index may consistently be used both as an index of race and as an index of survival, just because the survival in question is a racial survival, that is, because the selection works along racial lines. In a word, the brachycephalics multiply more freely, not because of their brachycephaly, but because of their greater fitness to survive. This fitness to survive depends on psychological traits which are associated with their race, it depends therefore, so to speak, upon their racial make. Brachycephaly is merely the trade-mark of that racial make by which it may be most clearly recognized.

If the criticism just considered rests upon a misleading use of logic, the next objection advanced by our author seems to be due to an oversight of one large side of anthropological doctrine. "Anthropology tries," we are told (pp. 199, 201), "to eliminate all environmental influences which may have modified the physical types of population." As far as I can judge from the context, this rather surprising statement should read somewhat as follows: "Professor Ripley (in attempting to interpret the complex actual combination of traits in conformity with his theory of three principal races) tries to eliminate *for the moment* all environmental influences which may have modified stature or pigmentation in such a way as to overbalance or obscure the hereditary or racial tendencies that would otherwise be apparent." If the sentence and the accompanying argument is to be thus interpreted, I need not discuss it here. But as the objection at least appears, as it stands, to be urged against "the philosophy of modern anthropology" in general, I must point out that anthropology, so far from attempting to eliminate environmental influences, attributes all human differences ultimately to such influences working either directly upon the present generation or through a selective process. Racial differences are conceived as the result of selection under different environments, and I know of no such elaborate study of the effects of environment on man

<sup>1</sup>As the most recent bit of evidence of the penchant of this race for military activity may be cited from A. M. Hansen's *Norsk Folkepsykologi* the fact that in Norway the membership of the voluntary clubs for practice in marksmanship is three times as numerous in the dolichocephalic as in the more brachycephalic population groups.

as that of Lapouge in connection with the origin and development of the race *Europaeus*<sup>1</sup> But the racial character once acquired has a certain tendency to persist and assert itself under changed conditions. Race becomes, so to speak, a reservoir of the past effects of environment. The question between race and environment is mainly a question of time.

It is a pleasure to be able to find much with which to agree in the sketch that Mr. Cummings gives of the theoretical origin of ethnic character, through selection and socialization under conditions of more or less isolation (pp. 202-206). But I cannot agree that "the real process of ethnic generation," as he describes it, "bears no resemblance to the process elaborated in modern anthropology" (p. 207). It appears to me rather that Lapouge's theory of the origin of the race *Europaeus* through natural and especially climatic selection, and in comparative isolation, may be regarded as an elaboration of Mr. Cummings' more general theory. The principal ground of disagreement is that whereas Lapouge regards the distinctive mental qualities of the race as still associated in some degree with its distinctive physical traits, Mr. Cummings insists that no such correlation can have survived the complex interbreeding that has gone on (p. 207). We are thus brought back to the point from which we started, and again our answer must be that the tendency toward such association of traits is asserted only as the necessary result of empirical data. Mr. Cummings again in this connection shows a disposition to meet such evidence by mere assertion. "The economic standard of worth," which is becoming more and more the standard that counts, "does not," he tells us, "recognize the ethnic factor" (p. 210); and again, "a glance at the composition of any of our social groups, from the urban slum population upwards, shows that the ethnical cleavage runs vertically through them all, and demonstrates the deceptive character of any idea such as that implied in the term 'ethnic stratification' or horizontal cleavage" (p. 210). Surely the anthropologists have never meant to imply that the ethnic composition of population is precisely parallel with its social composition. The ethnical cleavage is not pretended to be horizontal or exactly coincident with the social cleavage, but the data go to show that neither is it, as Mr. Cummings holds, merely vertical. It is rather oblique, with a tendency toward parallelism with the lines of social and also of economic demarcation. No one of these cleavages, social,

<sup>1</sup> *L'Aryen*, pp. 47-186, 350-365.

economic, or ethnical, is precisely parallel with the others; the racial line is related to either of the others somewhat as they are related between themselves. The upper social and economic categories; the urban residents, as contrasted with the peasants; the skilled laborers, the business and professional classes, as contrasted with the masses, contain a larger and larger proportion of dolichocephalic elements. Wealth is most abundant, industry, commerce, and discovery are most active in the dolichocephalic portions of Europe, and the leading nations in the conduct of the world's affairs are today the nations into the composition of which the Nordic race has entered most freely. Thus the data go to show that the economic standard of worth is not indifferent to the ethnic factor.

CARLOS C. CLOSSON.

LOS ANGELES, CAL.

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*The Distribution of Wealth: A Theory of Wages, Interest and Profits*, by Professor J. B. Clark, lately published by The Macmillan Company, has long been looked for with lively anticipation by students of economic theory. Earlier partial statements of Professor Clark's theoretical views, contained in monographs and in a great number of articles published in various periodicals, are here "brought into an orderly arrangement and extensively supplemented." The volume presents in a definitive form the results of Professor Clark's studies in the theory of distribution extending over the past twenty years. As the outcome of these studies, the preface states that "It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and that this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates."

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THE specimen number of *The Russian Journal of Financial Statistics*, edited by Charles Goodlet, and published by G. Barbet de Vaux, appears in English from the St. Petersburg press of W. Kirshbaum. This announces that the second number will be issued about May 1, 1900, and that the regular quarterly numbers will begin in September. The new journal gives similar information to that contained in the French *Bulletin de Statistique et de Legislation Comparée*, but limited entirely to Russia. There is, however, an evident aim in the articles to correct what to the editor seems extreme ignorance of Russian

statistical and financial material shown by Anglo-Saxons. The inconsistencies of our American Mint Bureau in the figures of Russian gold production come in for severe criticism, with the most caustic handling of the London *Economist* for charging the Russian Bureau of Finance with putting out false figures of balances. This last leads to explanations of terms used in the Russian accounts, and is followed by most exact and detailed statements of the Russian national debt, the interest account, and the budget of income and outgo. The monetary law of June 7, 1899, is given in English, as well as exact equivalents of Russian and English weights and measures, the reports of the Bank of Russia, the quotations on the St. Petersburg bourse, and similar material. The typography and make-up are unexceptionable.

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THE expiration of the charters of the Canadian banks in 1901 has brought forth a bill in the House of Commons for some changes in the system incidental to the expected extension of the charters for another ten years. The important changes proposed have to do with freer access to information on the condition of a bank by shareholders, and to the means of preventing the issue of notes by a bank after suspension.



## BOOK REVIEWS.

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*Discussions in Economics and Statistics.* By FRANCIS A. WALKER, Ph.D., LL.D. Edited by Davis R. Dewey, Ph.D. New York: Henry Holt & Co., 1899. 8vo, 2 volumes, pp. iv+454 and 481.

THE papers collected under the title of *Discussions in Economics and Statistics* are from the pen of a man so well known to the economists of this country that casual comment seems almost superfluous. President Walker was a clear writer and a masterly thinker. One is never at a loss to know what he means, nor can one read what he has written without feeling that either approval or disapproval demands the best of intellectual effort. His view of the nature of economic science may be regarded by some as unduly broad, by others as unduly narrow, his conclusions upon practical questions of economic legislation may be disapproved, one may even go so far as to express the opinion that the treatise upon political economy left by President Walker fails in that completeness and symmetry which characterized the system of Mill which he so successfully criticised; but all economists will acknowledge him to have been the most stimulating American writer that has addressed himself to industrial topics during the past thirty years. Such at least is my personal estimate of President Walker and I cannot think that the feeling of a pupil for his instructor has warped my judgment.

The editor of this collection of discussions, papers, and unpublished addresses, has done his work in an admirable manner. The volumes might have been made much larger, but Dr. Dewey has preferred to select those papers only which possess a distinctive value because supplemental to President Walker's published volumes. The article inserted under the title "The Literary History of the Wage Fund Theory," for example, represents only the last half of the original article, because the first half appears in a modified form in the author's treatise upon wages. The papers presented are classified under the heads of Statistics, National Growth, Social Economics, Finance and Taxation, Money and Bimetallism, and Economic Theory. The larger part of the papers

gathered under the above general titles have been previously published, but a few of them appear here for the first time. Of this class the editor calls especial attention to a lecture on "Private Property," a brief article entitled "Is Socialism Dangerous" and a longer paper on "Saving Banks."

As an economist, President Walker stands for three ideas. He was a conservative and consistent advocate of international bimetallism; he was a successful critic of the wage fund doctrine; and, while contemplating with equanimity any reorganization of industrial relations that might take place under the form of agreement or contract, he was a strong opponent, both as a moralist and as a scientist, of any measure that looked like confiscation of property or forcible change.

With regard to bimetallism nothing need be said. The eight articles which appear under this heading have been judiciously selected, and it is a great satisfaction, especially to one who sympathizes with the views of President Walker, and who believes the country to have brought upon itself much unnecessary embarrassment by its mistaken policy upon the currency question, that there is collected in these volumes a fairly complete statement of the opinions of perhaps the most distinguished American advocate of the joint use of silver and gold.

It is also pleasing to one who is somewhat jealous for President Walker's reputation, that there is here included, under the heading of "Economic Theory" the paper upon "The Literary History of the Wage Fund Theory." This is a part of an article published in the *North American Review* in 1875. We shall probably never know the truth respecting the motives that led John Stuart Mill to modify his views upon the law governing wages expressed in his "Principles of Political Economy." It is certainly true, as implied in this article, that Mr. Thornton ought not to be granted the credit of having changed Mill's opinion upon this subject. His treatise "On Labour" (the editor has reversed the courtesy of our English cousins and inserted in his text the American spelling) is certainly too weak a cause to have produced so tremendous a result. "No sportsman" writes President Walker, "who had fired at a squirrel, to hear a minute after, the crashing of boughs above him, and to see a bear come tumbling out of the tree, could be more astonished than Mr. Thornton must have been when, promptly on the publication of his work, John Stuart Mill, without a reservation and even without a parley, surrendered, through an article in the *Fortnightly Review*, the whole territory covered by the wage fund

flag, with all the *matériel* and properties complete, and marched out straightway without even the honors of war." In this article acknowledgment is made of Mr. Francis D. Longe's paper entitled "A Refutation of the Wage Fund Theory of Modern Political Economy" which appeared in 1866. But Mr. Walker does not state, nor even imply, that his own criticisms upon the wage fund doctrine were entirely independent of the article published by Mr. Longe, a fact well known to all his friends in this country. It seems proper, especially as his criticism is commonly referred to as the one which caused the old form of the wage fund doctrine to retire from the field of economic discussion, that the independence of his analysis from Mr. Longe's discussion should be recognized.

The most interesting, though possibly not the most instructive set of papers in this treatise, is the one collected under the heading "Social Economics," for here we find general comments upon what, for want of a better phrase, may be termed the "movement of the masses," joined to scientific criticism of the plans by which they seek to attain their ends. Here we find articles like the following: Socialism; The Socialist; Is Socialism Dangerous? What shall we tell the Working Classes? The Knights of Labor; The Duties of Capital; Mr. Bellamy and the New Nationalist Party; The Eight-Hour Agitation, etc. The article upon Mr. Bellamy is piquant reading from beginning to end, but its meaning is serious and its criticism sound. It shows that the great merit of Mr. Bellamy's book *Looking Backward*, which for a year was widely read, lay in the fact that he was a sufficient master of literary style to pass glibly over every difficult point of economics or social organization, without exciting the suspicion of his readers. Were things as easy as Mr. Bellamy portrays, one is inclined to sympathize with President Walker's exclamation: "Confound that Bellamy! . . . Why couldn't he get himself born under the Pharaohs? Then all this pain would have been saved; those partings need not have taken place; Christ need not have died." In this series of articles also, as well as in the articles which appear under the head of "Economic Theory," one finds many expressions of confidence in healthy independence, and, while reading them, one is forced to regret that, by President Walker's untimely death, the country is deprived of his counsel and criticism in view of the most recent trend in industrial organization. One would like to have the author who wrote the article "What shall we tell the Working Classes?" write another upon the topic, "What

shall we tell the Trust Promoters?" and to include in this latter the following sentences quoted from the former, "Just so far as competition fails, there will result waste of materials, dissipation of energy, misdirection of effort, ending in a lower and still lower satisfaction of human wants. The socialistic talk of the day, in disparagement of competition, is either mere miserable cant, or else, if sincere, it is the expression of profound ignorance of the conditions which attend man's subjection of nature to his needs."

This review might be indefinitely extended, but sufficient has been said to convey the impression that a distinct service has been rendered the science of political economy by this collection of essays. The views which they contain are doubtless expressed in the books and administrative activities of their author, but there is something more personal in an article than in a volume, and it is not infrequently the case that the first unguarded expression of an idea is its strongest and truest expression.

We perhaps have no right to expect a better engraving than the one which appears in these volumes, but all friends of President Walker, who have ever seen him at work, must regret that the marks of power have been smoothed away from the forehead.

HENRY C. ADAMS.

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*Die Pflicht im Wirtschaftsleben.* By GEORG VON MAYR. Tübingen, 1900. 8vo, pp. 66.

AN address delivered before the Munich Society, "Aula," last October, has been expanded into a pamphlet of 66 pages. It is of great interest, because it expresses the opinions of an experienced student upon fundamental questions of the day, and because further, it reminds us of the similarity of the problems pressing forward for solution, at the same time, in far separated quarters of those portions of the earth where alone advanced problems of a social nature are possible.

It is Professor von Mayr's conception of the relation of morals to economics, and his application of that conception to the fields of trusts and labor unions, that must chiefly interest us. His paper is, undoubtedly, a good antidote for the prepossession of the young economist that the moral field is subordinated to the economic. We have here, indeed, a reaction from this prepossession, which seems almost excessive. We are told that "all fundamental principles of

economic life are grounded in the law; they are the chief repressors of absolutist and violent egoism, from the establishment of the legal institutions of freedom, property, and inheritance up to the recent legal formulation of protection to labor and labor insurance. There can be no question that in economic life, law is decisive." On many of these points, it could be contended that economic conditions had been decisive in forming, and are decisive in sustaining, the existing laws.

The interesting point of all this is that while Dr. von Mayr raises points with which a colleague may find matter for controversy, he exhibits that wholesome breadth of view, that honest acceptance of the actual, and that freedom from the popular impulses and "isms" of the hour, which mark the ripe student of society. With him, duty, morality, is a separate, independent category. It is no popular conception, the resultant of a mass of influences too great for popular analysis, no secondary idea, not a sort of a handy  $x$  which stand for a complicated series of mechanical utilities, but a simple, fundamental, social impulse. Instead of looking on economy as the medium through which the environment causes a more or less fixed adaptation of human nature in the form of duty, and upon law as the crystallization of this process, he places economy last. Instead of the order: (1) economy, (2) morality, (3) law, his order is: (1) morality, (2) law, (3) economy. At times, the second member is left out: in a vast mass of individual actions, law does not intervene at all, but duty in the form of custom (peculiar to the field in question, whether large or small) is decisive upon the actions of man in his economic capacity. It will be noticed how neatly Dr. von Mayr disappoints us. We might expect rank socialism from the man that stoutly denies the overshadowing influence of economic evolution. Instead of that, we find a stronger individualism founded upon the ground of the evolution of morality within the individual! Nor is the apparently lower sphere assigned to economy a matter of prejudice. Such prejudice would be incomprehensible in a life-long economist, although perhaps not entirely unnatural in the author of *Die Gesetzmässigkeit im Gesellschaftsleben*. The whole impression, however, is that of the man who is master of his studies and not mastered by them. With simplicity similar to the treatment of duty, the state is given an objective existence which must needs struggle for survival against the baneful influences of socialism.

The different economic categories are passed in review, in order to discover their relation with the moral and legal worlds. With consumption, legal regulation has little influence. The duty of the individual, however, is set by moral norms which are not to be mistaken. While, of course, the duty of saving must not be neglected, the duty of spending is imperative. The great law is laid down that with advancing culture our tastes must become more refined, and our production less materialistic; one could wish this topic had been handled at length. The argument, however, is not that of the socialists, that too much capitalization reduces wages: it is rather that of the moralist, that an end to grosser satisfactions cannot be too early. Again, production is in large part properly under individual care, and also chiefly confided to the direct influence upon individuals of normal morality. The state is, indeed, a producer of many useful things, such as the army and navy, and it sanctions the historical development of different classes of producers; but the necessity of inequality and the utility of the opportunity of rising are inherent in human nature, and exert a direct moral effect in establishing the relations of economic persons. But individualistic production is open to grave abuses: wealthy land-owners withdraw their land from cultivation and turn it into parks, and manufacturers alternately force their plant into feverish activity and then bring it to a standstill, with a view to gaining profit from the inconvenience of others. It is a duty that the soil be kept in cultivation. We are reminded of Adam Müller's peasant's love of the soil as such. Moreover, it is a duty not to abandon the soil of the fatherland or at least that of its colonies. The protective tariff system should make it possible for cultivators to remain at home. In fact, the institutions of private property in land and private property in capital are only possible as the persons who have those social instruments under their private control conform to the conditions of regard for public welfare upon which they received it. Thus in general it is true that the capitalist does further public interests in the increase which he brings about in general wealth, but it is perfectly possible that capitalism may rage like a catastrophe of nature in a peaceful group of producers who have been following the beaten path. In such cases, the state does and should step in to regulate the aberration.

The laborer is bound, equally with the capitalist, to labor in the interest of the common weal. He may be a mechanic, but he is not a

mechanism. Labor is no ware to be bought and sold regardless of moral consequences. The laborer is first of all a man, with a man's duties and rights. Freedom of labor is necessarily coupled with duty to labor, *i. e.*, a social obligation to remain continuously at work. From this simple proposition is derived a plain argument as to the relation between law and labor. The tendency of labor to abuse its freedom may threaten the very existence of the state (which here seems to be taken synonymously with society) and it is the duty of the state to take proper measures for its preservation. What these measures are is indicated quite clearly. At the present stage of the game there is no possibility or utility in the forcible repression of trades unions. On the other hand, those persons commit a grave error who think that by encouraging the organization of trades unions to the highest point, the labor problem is to reach a final and peaceful solution. No such solution is to be found from the side of the initiative of the laborers. The state must, on the one hand, recognize the right of laborers to combine, and on the other hand must limit that right in such a way that combinations shall not be made for the purpose of stopping industry. The evil manifests itself at present chiefly in the sympathetic strike. Laborers stop work who are very remotely interested in the dispute in question; but what is worse, one company of laborers takes advantage of another. The sympathetic strike is oftenest a result of intimidation. If the socialistic organization of labor is carried too far, the state will be compelled to do more than simply attempt to keep the peace—it will have to intervene actively in education and with a system of official reconciliation and arbitration.

“The economic common duty of all who take part in the process of production, is the making possible of the largest production, and of one that shall be uninterrupted and that shall be kept free from all disturbances through the unsocial will of a single factor.

“From this point of view, every forcible interruption of the normal course of production by a decision *en masse* not to labor, or by a decision of undertakers not to allow labor, is an insurrection against the economico-moral common duty.

“If the state stands on the principle: right for laborers to combine, but no compulsion to combine—and it must stand on this principle if it is not going to give up entirely—then there can be no doubt about the necessity of liberal protection, not only for those

outside of a combination (*scabs*) but also, where the case arises, in favor of those combined in one society, against the more powerful members of another. It is important to notice that the question is one not only of the protection of individuals, but also of those who are in combination."

The increase of labor agitation has been accompanied by an increase of crime, especially among youth. Education is necessary to maintain the normal moral status.

It is in distribution that the intervention of the state is chiefly indicated. This portion of the essay might almost have been written by a socialist, it gives so liberal a play to the state. But no! Our author distinctly recognizes that charity is a moral duty active within the *individual*, and that, in actual exercise, it is chiefly individualistic. Nevertheless, the state may here, and properly does, take most active part. It may inculcate the duty of saving, and it must set up a system of protective duties in order to further the sense of common fatherland and national ideals. "A proper national policy of protective tariffs will grant a favorable distribution of air and sun for the totality of national production, against unfavorable tendencies of the economy of the whole world; it is not to be justified upon opportunist grounds, but it has also a significant, moral background. To hand over an important branch of national production to the tender mercy of free trade, were an offense against the common moral duty of the nation."

Notice that protectionism is here placed on the only basis upon which it and other positive legislation must stand, namely, that of charity.

But Dr. von Mayr goes still further, he not only champions state insurance of laborers against sickness, accident, and old age, but he believes in progressive taxation, in taxation of vested property, and in repression of excessive speculation, with a view to level out the differences in fortune between different members of society.

At the end, we feel that the ripe student may travel safely very far the road of state interference, which would lead the novice quickly to the brink of chaos. Dr. von Mayr's most telling sentence is, "The man and the money-maker must be reconciled."

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*Dictionary of Political Economy.* Edited by R. H. INGLIS PALGRAVE, F.R.S. Vol. III, N.-Z. London: Macmillan and Company, 1899, pp. xxii + 762.

THE publication of the concluding volume of *Palgrave's Dictionary* marks the completion of a notable achievement in English economic scholarship. At last the English-speaking world possesses a dictionary of political economy altogether admirable and worthy of the careful and long-continued labor bestowed on it. It has been twelve years in the making, instead of the originally expected three, and it has grown in size from two, to three, closely printed, sizable volumes. But the outcome richly justifies the long delay and the expansion of the original plan.

There are many noteworthy features about the dictionary, but two in particular deserve mention. One of these is the large number of articles treated; the other the long list of contributors, numbering some two hundred. In the list of articles the most frequent entries are from the departments of biography, theory, and the history of theories and systems, economic history, commercial institutions and practices. The individual articles have usually been treated by some competent specialist, are invariably well-written, solid, judicious, and of suitable brevity, and are always accompanied with good bibliographical notices. There is less insistence, too, on the ephemeral aspects of the subjects discussed than is the case with either the German, or the French, dictionary. It is likely to keep its freshness, therefore, longer than these. Finally may be noticed the cosmopolitan tone of the dictionary, which is largely due, no doubt, to the considerable number of foreign contributors—these with the Americans numbering about one fifth of the total.

Genuine congratulations are due, therefore, to the editor and publishers, for this substantial addition to the working outfit of English students and readers of economics.

A. C. M.

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*Einige strittige Fragen der Capitalstheorie. Drei Abhandlungen.* By EUGEN V. BÖHM-BAWERK. Vienna: Wilhelm Braumüller, 1900. 8vo. pp. iv + 127.

THIS thin volume contains the three articles upon the theory of interest published by Böhm-Bawerk last year in the *Zeitschrift für Volkswirtschaft, Sozialpolitik und Verwaltung*. It is devoted to the

defense of certain contested doctrines developed in the author's *Positive Theory of Capital*. Most attention is paid to the criticisms of the German professors Lexis, Philippovich, and Dietzel, though occasional reference is made to other writers—notably Mr. Horace White and Professor J. B. Clark.

The first essay is concerned with the "law of the greater productivity of more roundabout methods of production." It will be recollected that this law is the major premise of Böhm-Bawerk's explanation of interest, for upon it rests the doctrine of the "technical superiority of present goods." Of the numerous objections made to the law as formulated in the *Positive Theory* Lexis's strictures are taken as typical. "Since the beginning of civilization," he writes, "the increasingly successful tendency of technical advance has been to decrease the number of laborers using a given amount of capital . . . and at the same time to shorten the period of production." In support of this assertion he cites the saving of time affected by such technical improvements as the use of explosives in mining and of steam in transportation. Böhm-Bawerk's rejoinder is a characteristic bit of dialectic. What does the decrease in the number of laborers using a given amount of capital mean, he asks, if not an increase in the amount of capital for every laborer? Then, since capital is the result of previously accomplished labor, Lexis's assertion results in the statement that with technical progress laborers are continually using the result of more *past* labor; in short, that the average period of production is continually being lengthened.

Böhm-Bawerk does not content himself, however, with this shrewd answer, but goes on to discuss candidly the real gist of the objection—namely, that a newly discovered productive process is frequently shorter than the process it supercedes. He seems to put his case in the clearest light when he couples the law of the greater productivity of roundabout processes of production with the law of the decreasing productivity of land. He argues that just as the latter may seem at times to be set aside by improvements in agricultural practice, so the former sometimes seems to be contradicted by the invention of more expeditious methods. But in both cases the lapse of the law is only temporary; its operation is concealed, not stopped. The opportunities created by fortunate discoveries for the investment of capital in ways that will yield a speedy return are not sufficient to absorb the accumulations continually coming forward. On the other hand, no nation

has yet even approximately exhausted all the known methods of increasing its productivity by using more capital. The meaning of the law, then, is not that the roundabout method of production is inherently more productive, but that in its endeavor to employ its growing capital society is compelled from lack of better openings to accept those which promise an increase of product indeed, but only at the price of a longer period of waiting.

It has seemed appropriate to review the first essay at some length, because the thesis therein defended has been contested so frequently. The other essays may be more briefly dismissed. In the second, the writer argues, again against Lexis, that the undertaker's ignorance of the actual length of the "average period of production" does not invalidate his explanation of the rate of interest as dependent upon "the increase of product gained by the latest lengthening of the average period of all productive processes." Such knowledge is not necessary to the successful direction of economic activity. One may know that the product can be increased by lengthening the period of production, without having a definite idea how long that period is at present or how much each labor unit now produces.

A number of criticisms relating in general to the scope of the theory of interest furnishes the occasion for the last essay. Against Philippovich the author maintains that interest upon capital is quite distinct from undertaker's profits, and therefore that the theory of interest is not concerned with the explanation of the latter. Answering Dietzel, he denies that an adequate solution of the problem of interest can be found by combining rival theories, referring some cases to the productivity of capital, others to the exploitation of the non-possessing classes, and still others to the capitalist's abstinence. In his most vivacious manner he develops the incongruities in which such an explanation would result. Finally, the writer returns again to Lexis and his preference for the view that interest rests ultimately upon the economic power of capital as set over against the dependent condition of labor. This gives him occasion to define more clearly than he has elsewhere done his attitude toward socialism, or rather toward the influence of socialistic habits of thought upon contemporary economic theory.

On the whole, the book adds little or nothing to Böhm-Bawerk's well-known contributions to the interest problem; but it explains and amplifies certain points which seem to have been misinterpreted despite

the lucidity of the *Positive Theory*. Like all the writer's work, it is characterized by dialectical ingenuity and felicity of illustration. One notices, however, more errors of the press than might have been expected in a reprint.

WESLEY C. MITCHELL.

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*La Rendita Mineraria*. By LUIGI EINAUDI. Torino: Unione Tipografica, 1900. 8vo, pp. viii + 455.

THE rent of mines has never before, so far as the writer knows, been made the subject of a monograph. Aside from the brief discussions by Adam Smith, Ricardo, and their disciples very little attention has been paid to the matter by economists. Dr. Einaudi's elaborate study therefore deals largely with fresh material.

The bulk of the book, 383 pages, is devoted to an investigation of the manner in which mine laborers, operators, and owners have shared the product between them under varying conditions. Starting with the simple organization of the industry such as is found in the Middle Ages, or in a new country like California in 1849, the writer traces the gradual differentiation of profits from wages, and later of rent from profits, which has produced the highly complex system under which coal mining is now conducted in England.

On the basis of the material provided by this historical study Dr. Einaudi builds in his last chapter a theory of rent. He approaches the "whole truth" by three "approximations." First, the "pure theory" is expounded. This is Ricardian in substance, with the added refinement of a distinction between the "differential" and the "marginal" elements in rent. A mine yields a "differential rent" whenever the cost of producing minerals from it is less than the cost at the poorest mine worked. But the poorest mine may itself yield a "marginal rent," provided that the selling price of its output is greater than the cost of production, but not sufficiently greater to allow of working still poorer mines. In this case the owners of mines of better grades receive both a differential and a marginal rent.

The operation of the law of rent, however, is interfered with, to use the author's language, by certain "general modifying circumstances." The investigation of these and their influence forms the "second approximation." They are first, imperfect knowledge of the depth, extent, and richness of the mineral deposits which a mine will open

up, and second, the difficulty of estimating the future price of the product and future expenses of operation.

The third and final "approximation" consists in taking account of the "contingent modifying circumstances." Such, for example, are the peculiar risks attending mining in new countries, the enactment of special mining laws, etc. It is interesting to note that the writer is inclined to doubt the wisdom of state interference with mines, thinking that if allowed free scope private enterprise will work out the most advantageous organization of the industry.

The theoretical chapter confessedly presents no new principle, but it emphasizes the importance of several elements of the problem that one less intimately acquainted with the subject than Dr. Einaudi might overlook. The manner of exposition, however, is rather pedantic in its formalism. More valuable is the detailed account of the development of mining organization. The book is very readable, but, like many of his countrymen, Dr. Einaudi allows a certain facility of style to betray him into diffuseness.

WESLEY C. MITCHELL.

*Report on the Adoption of the Gold Standard in Japan.* By COUNT MATSUKATA MASAYOSHI, H. I. J. M's Minister of State for Finance. Tokio: Government Press, 1899. 8vo, pp. xvi + 389.

THE monetary history of Japan is here given in a lucid way by the minister who has been most influential in bringing about the establishment of the Bank of Japan and the gold standard. A brief report summing up results is followed by an orderly series of chapters, giving the details of each step, with tables of statistics.

The history divides itself into four periods: (1) 1868-1871, the beginning of the new régime; (2) 1872-1879, the new coinage, and depreciated inconvertible paper; (3) 1880-1885, the convertibility of the paper into silver; (4) the change in the standard from silver to gold.

The coinage system in operation in 1868 had lasted since 1600 without change, but while nominally intact it had been ruined by debasement. Unfortunately, the report gives no information in detail on this early period. But under the restoration, as early as 1871, it appears that plans had already been made looking forward to the gold

standard. The recent action of Japan, therefore was not due to a sudden decision, but in fact harks back to the time when Germany began her reform. The second period has many resemblances to the years of our Civil War, when resort to inconvertible paper caused great depreciation and serious financial disaster. The lesson of this experiment, like that of Russia, is that the value of such paper is dependent on the arrangements, potential or effective, for redemption. For the third period is given over to the carrying out by Count Matsukata (who became minister of finance in October 1881) of measures to secure a specie reserve from the surplus at the same time that he was retiring some of the inconvertible paper. With us, as with Russia, fiscal and monetary concerns had been confused, and fiscal deficits had been met by issues of paper money. The essence of the reform consisted in divorcing monetary from fiscal operations (p. 41). The clearheadedness with which the essential end was seen and kept in view shows financial ability of the first order. And in other parts of the process of reform practical shrewdness is a marked characteristic of the treasury management. (For instance, the exactness with which the minister hit upon the amount of Japanese silver which might return from abroad for redemption before July 31, 1898.) The steady accumulation of specie (*i. e.*, silver) went on in this period, until on January 1, 1886, resumption of specie payments was accomplished. The separation of the fiscal from the monetary system led naturally to the establishment of a great Central Bank (1882), through which the currency of the country should be regulated. The policy of Japan towards banks lies in giving up numerous national banks like those of the United States for a central institution like those of European states. By the act of 1888, all national bank notes, and all government paper money, were exchanged into convertible silver notes of the Bank of Japan (p. 88). The outcome (in 1898) shows convertible bank notes of 197,399,901 yen (with a gold reserve of 65,513,471 yen), and a practical elimination of government paper and national bank notes, and a specie circulation of 146,454,978 yen (of which 83,648,654 yen was gold).

Since the removal of the government paper was only a step in a carefully arranged series of measures, the culmination of the monetary policy is to be found in the fourth period (1886-1898), in which the transition was effected from a silver to a gold standard. The reason for the change was, in substance, the same as the reason for abolishing

the inconvertible and fluctuating paper standard. The instability of the silver standard showed itself so characteristically in 1893, that the adoption of gold was only a question of means and opportunity. The opportunity came with the payment of the Chinese indemnity, which was exacted in British money (although originally provided for in *Kuping Taels*, or silver). The change of the standard was brought about by Count Matsukata in the act of March 29, 1897 (see this JOURNAL, June 1897, p. 378), in spite of considerable opposition. The problem was the redemption in gold of silver 1-yen pieces, of which 165,133,710 had been coined in all. For this purpose 74,455,735 yen of gold had been coined by April 1898. The time for exchange, which had been fixed at five years by the act of 1897, was subsequently shortened to the period between October 1, 1897 and July 31, 1898. Of the silver yen, 99,508,740 had been exported, 11,028,633 taken out during the war with China (1894-5) and 5,732,027 sent to Formosa. 45,588,369 yen of silver were exchanged for gold by July 31, 1898. Besides the silver coins, 29,505,453 yen of silver mint receipts given to private persons for deposits of silver bullion were redeemed in gold.

The government now had on hand 75,093,822 yen of silver to be disposed of. No other part of the plan was better managed. 27,567,012 yen were recoined into subsidiary money by 1899; 6,740,148 yen were used in Formosa, Korea, and elsewhere; and 40,786,662 yen were sold in China — all within a year and three months after promulgation of the new law. The shrewdness of the management appears in finding that the loss on the silver sold was only 5,553,312 yen, which was covered by the profit on the seigniorage of subsidiary coins amounting to 5,651,961 yen. This is a highly creditable record, from which the United States has much to learn.

The results of the establishment of the gold standard have been (1) steadiness in exchange; (2) a great increase in exports to and imports from silver-using countries; (3) improved foreign credit and trade relations with gold-using countries; and (4) better currency conditions at home. This latter change may be seen by contrasting 1884 with 1898. In the former year there was a specie circulation of 53.5 millions yen (of which 11.9 millions were gold), 93.3 millions of government paper, 31.0 millions of national bank notes, or a total circulation (less reserves) of 177.9 millions. In 1898 the specie circulation was 146.4 millions (83.6 millions being gold), the government paper 5.4 millions, national bank notes 1.8 millions, convertible notes of

Bank of Japan 197.3 (having 65.5 millions in gold reserve), or a total circulation (less reserves) of 285.6.

J. LAURENCE LAUGHLIN.

*Le Credit Commercial et la Banque Nationale de Belgique.* Par GUILLAUME DE GREEF. Bruxelles: O. Mayolez et J. Audiarte, 1899. 8vo. pp. x+469.

THOSE who have the courage to read M. de Greef's big book, consecutively and fully, will perhaps find themselves at a loss to understand just why it has appeared in its present form. The volume may roughly be divided into four parts, each apparently animated by a different purpose. In the first portion of his work the author seeks to give an account of the functions of credit; in the second appears a general view of systems of banking as now carried on by the principal commercial nations of the world, *e. g.*, England, Germany, the United States, etc. The third part is occupied with a historical account of the Bank of Belgium; the fourth criticises the organization of the institution and its recharter. Little connection between the various portions of the the plans for work can be traced; in short, the book appears to be the result of a process of accretion and not a product of deliberate construction.

According to the preface, the first part, dealing with the analysis of the processes of credit was the basis upon which the book was originally projected. "Cet ouvrage," writes the author, "est specialement consacré à l'étude de la structure et du fonctionnement de la circulation et du credit en matière commerciale;" yet the section dealing with commercial credit covers but a bare seventy-one pages out of a total of 479. Perhaps this brevity should not be regretted, for the author's discussion of credit is as weak as any portion of his work. Not that this discussion startles by its novelty—such is far from being the case. "In its simplest form," says M. de Greef, "*credit* is a *loan* of goods or money." Three "functions" of credit are recognized, (1) to effect a transfer of the means of production, (2) "to create social means of production by augmenting those which naturally exist," and (3) "to economize the use of money." Here appears at once the old and too familiar confusion between credit, credit instruments, and credit institutions. Nor is this the worst. Speaking of the second function ascribed by him to credit, M. de Greef writes:



The following example will give a striking demonstration of this new and important function : A, a large grain importer, sells on the market goods to the value of 100,000 francs to B, and the latter gives him a bill for this amount at three months. Then, under similar conditions, B sells the goods to C for 105,000 francs, C to D for 110,000, D to E for 115,000, and so on, the increase becoming more and more marked, on the same day. A, B, C, D, etc., having received bills signed by their respective debtors may, on the same day, discount these notes with their bankers, and will receive, the first 100,000, the second 105,000, the third 110,000, the fourth 115,000 francs *in coin*, in all 430,000 francs, and that too for a single bill of goods or capital, whose greatest exchange value is, in this example, 115,000 francs. For three months they will have at their disposal a *capital of about four times the value of the goods transferred*. Consequently credit increases and, in this sense, creates means of production or capital.

At this rate it is not easy to see why the commercial world should ever want for either coin or capital.

The consideration of different kinds of credit instruments leads next to a discussion of the origin and history of the bank note, in which it is shown that coin is rapidly being eliminated as a medium of exchange, while the world's volume of bank notes is greater than the stock of coin in bank vaults. On the other hand, the note is now being displaced by the deposit account (or, as the author puts it, the check). Could anyone have doubted these statements? This discussion is followed by a survey of the world's clearing-house system, from which M. de Greef passes to the review of current banking, with which the second main part of his work is taken up.

In treating the present organization and working of the Scotch, American, German, and other banks little or no new material is added to that already easily available. There is given merely the usual array of familiar facts and figures. Nor, having said thus much, can the candid critic stop. It must be admitted that in many statements M. de Greef is absolutely incorrect, and that in many more he expresses himself in so misleading a way as to give at least a strong impression of inexactness. Thus in speaking (p. 120) of the national banks of the United States he writes: "By way of tax each bank pays an assessment of one half of 1 per cent. every six months upon the average amount of its notes in circulation; if this circulation be reduced to 5 per cent. of the capital the tax ceases to be payable. All persons or corporations other than national banks, and consequently all state banks, are subject to a tax of 10 per cent. upon notes in circulation, etc." Again (p.

119): "Besides these national banks there are also a certain number of state banks controlled by the special legislation of the state where they are established; naturally their *circulation* and their general importance are much less considerable." By the side of this singular statement should be placed one culled from p. 122, which refers to the state banks as institutions "which have *generally* given up the right to issue bank notes, because of the disadvantageous fiscal conditions under which they labor." The character of the passages just cited is sufficient to indicate the nature of the criticism to which this part of M. de Greef's book must be subject. Similar flaws, apparently due to inaccurate information, are found throughout the treatment of the English and continental banking systems.

In the third and fourth of the general divisions, which treat of the National Bank of Belgium and its recharter, a much more considerable degree of familiarity with the subject is displayed. It is just in these portions, however, that scientific calmness is thrown to the winds and vituperative partisanship usurps its place. The book, in fact, degenerates into a thorough jeremiad. "We do not in the least deceive ourselves regarding the fate reserved for this book by the public powers. Four years before the expiration of the charter granted to the so-called 'National' Bank the government means to make use of the formidable and servile majority which it controls in our Chambers in order to prolong the existing régime," remarks M. de Greef in the preface of his work. This political situation makes an analysis of the present banking system entirely timely, and the author endeavors to point out a number of serious defects in the bank's mode of operation, which he thinks should be corrected in the proposed new charter. Most of the sources of the dissatisfaction which may be justly felt, according to M. de Greef, are found to be attributable to the institution's conservatism. Thus the number of branches and banking offices has always been insufficient, rates of interest have been high and inflexible, the length and conditions of loans unsatisfactory, etc. It is sought to substantiate these indictments by sufficient statistics, some apparently accurate and well-executed diagrams, and a not always convincing line of argument. The seat of existing difficulties M. de Greef finds in the oligarchical plan upon which the Bank of Belgium is at present organized and which promises to be perpetuated. Under this form of organization the affairs of the institution are controlled by a comparatively small minority of the stockholders and, the bank having an almost exclusive monopoly, there is little possibility of progress.

Of the essential justice of some of M. de Greef's antagonism to the methods of the Bank of Belgium there can be little doubt. Much more hesitation must be felt when the reader learns that a great deal of his hostility rests upon the broader ground of dissatisfaction with present methods of banking throughout the world. It is, in fact, when his theoretical solution of the general banking and credit problem is broached, that the conservative student is likely to feel the greatest shrinking. This solution appears to be very similar to what is known in the United States as the plan for "mutual banking," a system for doing away with the use of money and for guaranteeing the immediate availability of all property, which its owners desire so to use, as a medium of exchange. M. de Greef, in fact, sums up his notions very concisely in a single passage :

The organization of the collective force, credit-currency, socialization of capital, in other words the emancipation of labor, disuse of coin, collective credit, such is the conclusion of this work ; this conclusion itself is but the weak and imperfect echo of the fearful clamor, ever increasing in violence, which issues from throats of laborious humanity, preoccupied always with the pursuit of its progressive ideal of well-being and justice.

Of the value of the vague and unpractical notions which have been attributed to M. de Greef, whose ideas are fairly represented by the foregoing passage, nothing needs be said. They have recently become especially familiar to students of the monetary question, so far at least as they relate to that question. M. de Greef's book possesses small permanent value. From the weak-kneed and incorrect theory of credit with which the treatise opens to the biased criticism with which it closes, colored as it is throughout with vague and illusive theories looking toward a commercial millenium, there can be found within M. de Greef's pages but a scant amount of information for the student of monetary history, and no suggestions useful to the theorist in search of an analysis of credit phenomena.

H. PARKER WILLIS.

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*A Dividend to Labor. A Study of Employer's Welfare Institutions.*

By NICHOLAS PAINE GILMAN. Boston : Houghton, Mifflin & Co., 1899. Crown 8vo. pp. viii + 400.

A SINCERE desire to promote good feeling between workmen and employers, and a strong conviction that such a feeling is growing, give to this book an essential unity. But for these traits it would be a

rather loose collection of material. The third part called "A Direct Dividend to Labor," is logically the first to the reader acquainted with the author's well known and valuable book on *Profit Sharing* published in 1889. As a supplement to the earlier work there is here given a detailed description of five cases of successful profit sharing, and a review of the progress made in the period, which indeed seems to be very slight. The question in the reader's thought in picking up this volume is likely to be, Has the author's view of the merits of profit sharing been changed by ten added years of close observation? There is hardly a word that indicates any conscious change of opinion, though more than once he is put on the defensive by various criticisms of the method. He still has faith in profit sharing, and argues for it with a pleasing union of earnestness and moderation.

In the other parts of the book, however, one cannot fail to note the signs of advance, or perhaps it were better to say, change, in his thought. He repeatedly states that it is not so much the particular plan for which he pleads as a right spirit in those working together as employer and workman and all measures that will foster that spirit. In Part I, "The Modern Employer," he recalls the evils of a lack of understanding and sympathy in the wage relationship, emphasizes the need of "moralizing," the employer, and of his taking a more sincere interest in his workmen, and strikes the keynote of the book: "the particular forms in which his good will shall best take effect are a matter of detail. The spirit . . . is the main matter." In the two chapters following, on "A Realizable Ideal," and on "Robert Owen," and in the final chapter of the book on "The Reasonable Way," the author argues for this view with the spirit of a conservative and the zeal of a reformer.

The heart of the book, nearly two thirds (233 pages) of the text, is, under the general title "An Indirect Dividend to Labor," given to a description of welfare institutions and employers' liberality to workmen in Europe and America. This is not always interesting reading with its multitude of details, but is a welcome collection of facts for the student, and must be more effective to inspire action and imitation than any abstract argument could be. The entire absence of any theoretical analysis must, however, strike the economic student as a defect, for there is no indication of the class of enterprises in which such measures are most practicable, or how competition increases the difficulty in other cases. Nevertheless one may believe with the author

that "welfare institutions like those here depicted will doubtless play a larger and larger part in the development of industry," while sharing with him a distrust in "mere machinery," and believing that "good will in the employer, a steadfast desire to be the helper of his employees, is the one trustworthy foundation."

Many who are skeptical as to the soundness of the despecializing principle of profit sharing in an age of growing industrial complexity, many who will see in the phrase, "a dividend to labor" a somewhat loose expression, will heartily applaud the message in this volume. It is likely to lead to more and greater practical results than the book on profit sharing, though that strongly influenced opinion. Some may consider this book sentimental; others will see in it a *naïve* plea for the impossible. But the average man, and that means most of us, finds a charm in just such a mixture of soft-heartedness and hard-headedness as is presented in this volume.

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# THE JOURNAL OF POLITICAL ECONOMY

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## THE INCOME TAX AND THE NATIONAL REVENUES.

THE income-tax question will not down. Again and again it bobs up, more or less serenely, in party platforms, in the speeches of congressmen and reformers, and even in serious economic literature.<sup>1</sup> Sometimes it is recognized that an amendment to the Constitution may be necessary before a national income tax can be imposed, but more often the partisans of this mode of taxation seem to look forward to a reversal of the supreme court's decision of five years ago, in which, they never tire of reminding us, only a bare majority of the court concurred, and which might therefore be overruled if both of the associate justices appointed since that time should disagree with the former majority. It is therefore important to determine what basis there is for this expectation.

### I.

Unless it can be shown that the term "direct taxes" is used in the Constitution in some unusual and esoteric sense, it is not

<sup>1</sup>See for example HOWE, *Taxation in the United States under the Internal Revenue System*; JOHN K. BEACH, "The Income-Tax Decision," *Yale Review*, May 1896; C. J. BULLOCK, "The Direct-Tax Clause of the Federal Constitution," *Political Science Quarterly*, June 1900.

likely that any future decision will declare an income tax to be other than a direct tax. Economists and writers on taxation of every school and all shades of belief agree in classifying this form of taxation as direct. It is true the earlier Physiocrats, because of their peculiar notion that all taxes fell at last upon land, held that the land tax was the only direct tax; but Turgot, the most widely known of all the Physiocrats, enumerated three kinds of taxes: the direct tax on land, the direct tax on persons, and indirect taxes on consumption; and by the direct tax on persons he meant not a uniform poll-tax, but a tax varying with the wealth or income of the taxpayer.<sup>1</sup> Outside of the Physiocratic circle there is practically no dissent from the classification of the income tax as a direct tax, although the definitions of direct taxes vary.<sup>2</sup>

But in determining whether the income tax is direct within the meaning of the Constitution, a more important consideration is of course the intention of the framers of the Constitution. The unanimity of the economists would avail little if it should appear that a different view obtained in the constitutional convention of 1787. But there is nothing to show that such was the case. The writings of the Physiocrats were the only source from which a different view could well have been derived; but the Physiocratic doctrines never gained any general acceptance in America. The *mémoire* which Turgot addressed to Franklin was probably better known in America than were the earlier

<sup>1</sup> "Il est impossible qu'elle soit uniforme." *Oeuvres* (Paris, 1808), iv. p. 209. The French capitation-tax of the eighteenth century was proportioned to the fortune of the subjects, except in the case of the nobility. Adam Smith also meant by "capitation taxes" taxes varying either with the "fortune or revenue" of the taxpayers, or with their rank.

A little further on, Turgot says that the capitation [income] tax is indirect in so far as it applies to certain elements of income, but that the part proportioned to income derived from land is a direct tax. It is interesting to note the correspondence between this classification and the first decision of the supreme court in the income-tax cases of 1895.

<sup>2</sup> John Locke may be said to have hinted vaguely at a different classification in the fugitive pamphlet on money and interest in which he anticipated the Physiocratic doctrine of incidence; for while he made no use of the adjective "direct" as applied to taxation, he did recommend "laying it directly where it will last settle."

Physiocratic writings, but in that paper the terms "direct" and "indirect" tax seem not to have been used.<sup>1</sup> On the other hand, there is every reason to believe that the framers of the Constitution followed the usage of Adam Smith, who eleven years before the convention met had refuted the Physiocratic doctrine as to the incidence of taxes, whose work had gone through several editions before 1787, and who is known to have exerted a very decided influence upon the American leaders of that time. Albert Gallatin, writing in 1796, stated emphatically his belief that the distinction in the minds of the framers of the Constitution was that of Adam Smith.<sup>2</sup> Gallatin was born and bred a Frenchman, and would have been as likely as any American of the time to accept the Physiocratic view; and in the absence of any evidence to the contrary the testimony of such an authority as Gallatin should be considered conclusive in any question of finance. Now Adam Smith gave no formal definitions of direct and indirect taxes, but it is impossible to mistake his meaning. He called taxes on receipts or incomings direct, and taxes on consumption or expenditure indirect.

This, then, was in all probability the distinction in the minds of the members of the constitutional convention. The debates throw very little additional light on the subject, although it is clear that in the mind Gouverneur Morris, who was responsible for the use of the term, the antithesis was between direct taxes on the one hand and customs and excise duties on the other. On the 12th of July, having moved that taxation should be in proportion to representation, Mr. Morris "admitted that some objections lay against his motion, but supposed they would be removed by restraining the rule to *direct* taxation. With regard to indirect taxes on exports and imports, and on consumption, the rule would be inapplicable."<sup>3</sup> Afterward he attempted to have the whole clause stricken out. "Let it not

<sup>1</sup> Possibly the words may have been used in the portion of the *mémoire* which is lost.

<sup>2</sup> *Sketch of the Finances of the United States*, pp. 11-14; cf. ADAMS, *Taxation in the United States, 1789-1816* (*John Hopkins University Studies*, vol. ii), p. 282.

<sup>3</sup> ELLIOT'S *Debates*, v. p. 302; BANCROFT, *History of the Constitution*, ii. p. 83.



be said," he urged, "that direct taxation is to be proportioned to representation. It is idle to suppose that the general government can stretch its hand directly into the pockets of the people, scattered over so vast a country. They can only do it through the medium of exports, imports, and exercises."<sup>1</sup> Mr. King asked "what was the precise meaning of direct taxation," and no one answered.<sup>2</sup> It is not strange, especially in view of Adam Smith's omission to give a formal definition of direct taxes, that the members of the convention had no definition at their tongues' ends, as they would have had if they had accepted the simple Physiocratic distinction. Everyone knew in a general way what direct taxes were, but no one could give a precise definition on a moment's notice. The same difficulty might easily exist even today.

At the close of the convention Luther Martin made a report of its proceedings to the legislature of Maryland, in which he explained and analyzed the proposed taxing power of Congress by distinguishing between "direct taxes, by capitation tax, or by assessment," and "duties, imposts, and excises." These last three words, he explained, meant respectively stamp duties, custom dues; and other taxes on consumption.<sup>3</sup>

In the ratifying conventions of the various states, also, occasional attempts were made to define the term "direct taxes." Thus in the New York convention Mr. Jay said "that direct taxes were of two kinds, general and specific," and that "the objection [then under discussion] could only apply to the laying of general taxes upon all property."<sup>4</sup> In Virginia, Mr. Monroe asked rhetorically: "What is the extent of the power of laying and collecting direct taxes? Does it not give to the United States all the resources of the individual states? Does it not give an absolute control over the resources of all the states?"<sup>5</sup>

Mr. Marshall, afterwards chief justice, following the fiscal usage of the Virginia government, stated that the objects of direct taxes were "well understood," and that they were "lands,

<sup>1</sup> ELLIOT'S *Debates*, v. p. 393.

<sup>2</sup> *Ibid.*, v. p. 451.

<sup>3</sup> *Ibid.*, i. p. 368.

<sup>4</sup> *Ibid.*, ii. p. 381.

<sup>5</sup> *Ibid.*, iii. p. 216.

slaves, stock of all kinds, and a few other articles of domestic property.<sup>1</sup> Two years later Gouverneur Morris seems to have used the term "direct taxes" as practically synonymous with "internal" taxes.

In Hamilton's draft of a constitution it was proposed to apportion only land and capitation taxes; but instead of adopting this proposal, the convention, being as a body much more in favor of decentralization than was Hamilton, extended the rule of apportionment to all direct taxes. Hamilton afterwards expressed his disapproval of apportionment according to population.

When in 1794 it was proposed to tax carriages, Madison, who had been a leading member of the constitutional convention, opposed the tax on the ground that it would be direct, and therefore unconstitutional; while those who supported the measure contended that the tax would be indirect because it would be a tax on consumption. There was a long debate over the point, but no one intimated that direct taxes were only land and capitation taxes. On the contrary, Mr. Sedgwick said "that a capitation tax, and taxes on land, and on property and income generally, were direct charges. . . . He had considered these, and these only, as direct taxes."<sup>2</sup> If income taxes had at this period been more generally known by that name, they would no doubt have been more frequently mentioned as direct taxes.

When the question came before the supreme court, Alexander Hamilton appeared for the government; but while arguing that the carriage tax was indirect, he expressed the opinion that the various forms of direct taxes were "capitation or poll taxes," "taxes on lands and buildings," and "general assessments, whether on the whole property of individuals, or on their whole real or personal estate." Again, he said: "*Duties, imposts, and excises* appear to be contradistinguished from *taxes*, and while the latter is left to apportionment, the former are enjoined to be uniform."<sup>3</sup> He showed that the English carriage tax was

<sup>1</sup> *Ibid.*, iii. p. 229.

<sup>2</sup> *Annals of the III Congress*, 644.

<sup>3</sup> *LODGE's Hamilton*, vii. p. 332.

regarded as an excise; an argument which seems to have had much weight with the court. Nowhere, up to this time, is there any trace of the later theory that land and capitation taxes were the only taxes which were intended to be apportioned.

## II.

It is usual for critics of the court's latest decision to assert that it reversed several previous decisions of the same tribunal extending over a century of time. This statement in all its varying forms is due to a grave misconception; to an entire failure to distinguish between judicial decisions and more or less irrelevant *dicta*. It refers, of course, to the series of decisions, beginning with the Hylton case in 1796 and ending with the Springer case in 1880, in which the meaning of the term "direct taxes" in the Constitution had been discussed. But does it follow, because Daniel Hylton was obliged to pay the carriage tax on his one hundred and twenty-five chariots a century ago, that an income tax may be levied without apportionment? Let us see.

The only question before the court in the Hylton case<sup>1</sup> was the constitutionality of the carriage tax. The court at that time was in doubt whether it had the power to declare an act of Congress void on the ground of unconstitutionality; but the carriage tax was sustained chiefly because it was regarded as a tax on expense or consumption—in other words, an excise. But the suggestion was made incidentally and with much hesitation, by some of the justices who heard the case, that the only, or at least the principal, direct taxes in the constitutional sense were land and capitation taxes. It is to this doubtful suggestion that the confusion on the subject is primarily due. It has been repeated in its more extreme form and with increased positiveness in succeeding cases and in the text-books, until it has seemed to some to have the force of law. Certainly nothing was farther from the minds of the justices who first made the suggestion.

<sup>1</sup> 3 Dallas 171.

Mr. Justice Chase used the following language :

It seems to me, that a tax on expense is an indirect tax ; and I think, an annual tax on a carriage for the conveyance of persons, is of that kind ; because a carriage is a consumable commodity ; and such annual tax on it, is on the expense of the owner. I am inclined to think, but of this I do not give a judicial opinion, that the direct taxes contemplated by the Constitution, are only two, to wit, a capitation, or poll tax, simply, without regard to property, profession, or any other circumstance ; and a tax on land.—I doubt whether a tax, by a general assessment of personal property, within the United States, is included within the term direct tax.

Mr. Justice Paterson was not willing to say, even in this doubtful manner, that land and capitation taxes were the only ones intended ; he seems to have had in mind a general property or income tax as coming within the scope of direct taxes. He said :

Whether direct taxes, in the sense of the Constitution, comprehend any other tax than a capitation tax, and a tax on land, is a questionable point. If Congress, for instance, should tax, in the aggregate or mass, things that generally pervade all the states in the Union, then, perhaps, the rule of apportionment would be the most proper, especially if an assessment was to intervene. . . . I never entertained a doubt that the principal, I will not say the only, objects that the framers of the Constitution contemplated as falling within the rule of apportionment, were a capitation tax and a tax on land. . . . All taxes on expenses or consumption are indirect taxes. A tax on carriages is of this kind, and of course is not a direct tax. Indirect taxes are circuitous modes of reaching the revenue of individuals, who generally live according to their income.

These definitions of indirect taxes were in entire conformity with the teachings of Adam Smith, and the opinion closed with a quotation from *The Wealth of Nations* in support of the classification given.

Mr. Justice Iredell, the only other member of the court who gave any reasons for his opinion, also declined to acquiesce in the definition suggested by Mr. Justice Chase, and confined his conclusions strictly to the case in hand :

There is no necessity, or propriety, in determining what is or is not, a direct, or indirect, tax in all cases. Some difficulties may occur which we do not at present foresee. Perhaps a direct tax in the sense of the Constitution, can mean nothing but a tax on something inseparably annexed to the soil :

something capable of apportionment under all such circumstances. A land or a poll tax may be considered of this description. The latter is to be considered so particularly, under the present Constitution, on account of the slaves in the southern states, who give a ratio in the representation in the proportion of three to five. Either of these is capable of apportionment. In regard to other articles, there may possibly be considerable doubt. It is sufficient, on the present occasion, for the court to be satisfied, that this is not a direct tax contemplated by the Constitution, in order to affirm the present judgment.

These opinions do not in the least indicate that taxes on personal property in general were regarded as indirect, but merely that the carriage tax was regarded as a tax on consumption and not a property tax. The court distinctly refused to determine the meaning of the term "direct taxes." The suggested definition was not even the means by which the court arrived at its conclusion; it was entirely *obiter*. Yet it may be held to have some value, not as a judicial precedent, but as historical evidence. Much stress has been laid upon the circumstance that two members of the court were distinguished members of the constitutional convention. But neither of these members expressed any opinion in favor of the exclusive definition of direct taxes. The only one of them who discussed the matter at all was Mr. Justice Paterson, who considered the definition "questionable," and adhered strictly to the economic classification then in vogue. He was the only member of the court who spoke with any certainty on the subject, and he declined to express the opinion that land and capitation taxes were the only direct taxes; he contented himself with saying that they were the *principal* direct taxes the framers of the Constitution had in mind, which may be conceded on all hands. There is a vast difference between saying that the members of the convention had in mind chiefly the forms of direct taxation then most generally in use, and asserting that they intended to exclude all other forms.

A peculiar chain of circumstances, involving three other decisions of the supreme court, leads up from the Hylton case to the first case involving an income tax. After the Hylton case the suggested definition of direct taxes slumbered for more than seventy years, and seems to have gained strength in the

meantime. The meaning of the term was again called in question in 1868 in the case of *Pacific Insurance Co. vs. Soule*,<sup>1</sup> although it was not in that case the principal question at issue. This case is sometimes referred to as if it involved an income tax; but the tax in question was really a business tax on insurance companies, measured by their premiums and dividends. After quoting the *dicta* of Justices Chase and Paterson in the *Hylton* case, and citing commentators who based their statements upon those *dicta*, the court reached its conclusion by means of this extraordinary logic:

If a tax upon carriages, kept for his own use by the owner, is not a direct tax, we can see no ground upon which a tax upon the business of an insurance company can be held to belong to that class of revenue charges.

The impracticability of apportioning a business tax on insurance companies was given as an additional reason for sustaining the tax as it stood.

Although the reasons given are not satisfactory, the court was probably right in its decision. But it by no means follows that an income tax is also indirect. A business tax, even so far as it is measured by dividends or receipts, is essentially different from a general income tax, and one may easily be indirect while the other is direct. Such, indeed, is the case according to the most commonly accepted economic classification, based upon incidence. It makes all the difference in the world in the incidence of a tax whether it is a general or an exclusive tax. A general income tax cannot be shifted; a tax on the income of a particular business generally can be.<sup>2</sup> There is as much difference between a tax on a particular business and a general income tax as there is between a tax on pleasure carriages and a general property tax. Perhaps even a greater difference; but the distinction in either case is so obvious that it ought not to be necessary to point it out.

The other two decisions have even less relation to an income tax. In *Veazie Bank vs. Fenno*<sup>3</sup> (1869) it was decided that the

<sup>1</sup> 7 Wallace 433.

<sup>2</sup> Cf. SELIGMAN, *The Shifting and Incidence of Taxation*, 2d edition, p. 289.

<sup>3</sup> 8 Wallace 533.

tax on the circulation of state banks was not a direct tax, largely because Congress had never actually apportioned any but land and capitation taxes; and the opinion continued:

And it may further be taken as established upon the testimony of Pater-son, that the words direct taxes, as used in the Constitution, comprehended only capitation taxes, and taxes on land, and perhaps taxes on personal property by general valuation and assessment of the various descriptions possessed within the several Estates.

The succession tax was sustained in 1874 in *Scholey vs. Rew*.<sup>1</sup> It was held not to be a tax on real estate, but on the devolution of real estate, or on the right to become the successor. With regard to the meaning of direct taxes the court said:

Whether direct taxes in the sense of the Constitution comprehend any other tax than a capitation tax and a tax on land is a question not absolutely decided, nor is it necessary to determine it in the present case.

The tax on bank circulation was properly classed as indirect, for it is a tax on a special privilege, or a particular act. The succession tax, on the other hand, is a direct tax in the ordinary sense of not being shifted. But among writers on taxation there are at least four different criteria for distinguishing between direct and indirect taxes. According to these four modes of classification, direct taxes are (1) those finally borne by the persons from whom payment is demanded; (2) taxes on revenue, as distinguished from taxes on expense; (3) taxes assessed at regular intervals by means of rolls of taxpayers' names; (4) taxes assessed directly upon immediate and permanent manifestations of taxpaying ability. It may be noted in passing that the income tax is direct according to all these criteria; but according to the last two, which are administrative rather than strictly economic, the succession tax is indirect, and it is so classified on the continent of Europe by economists and administrative officials alike. In such a case as this it was eminently proper for the court to give the government the benefit of the doubt.

All these cases, then, were decided correctly, although the reasons given by the court are not always convincing. And

<sup>1</sup> 23 Wallace 331.

none of these decisions is reversed by that of 1895, which had to do only with an income tax. Indeed, the court took especial care not to overrule, even in *dictum*, those decisions which had sustained "taxation on business, privileges, or employments."<sup>1</sup> As for the theory that "direct taxes" meant only land and capitation taxes, that had never been determined. In no case had the court been called upon to pass upon that hypothesis; and indeed it is difficult to see how a case could be brought which would require such an exclusive definition.

The chief stumbling-block remains to be considered. The case of *Springer vs. United States*<sup>2</sup> had to do with an income tax; but even the decision in this case has not necessarily been reversed. As the court pointed out in the first decision of *Pollock vs. Loan and Trust Company* in 1895, Mr. Springer's income was derived wholly from professional earnings and interest on United States bonds, and the validity of the tax as to either source was sufficient to sustain the action, which was an action of ejectment brought on a tax deed issued on the sale of real estate for income taxes.<sup>3</sup> The court was not required to decide whether the income tax was constitutional as a whole, but only whether it could be levied upon either part of the income in question. The validity of the whole income tax not being a necessary consequence of the Springer case, what part of the tax was sustained? The conclusion of the court was expressed in the following comprehensive language:

Our conclusions are, that direct taxes, within the meaning of the Constitution, are only capitation taxes, as expressed in that instrument, and taxes on real estate; and that the tax of which the plaintiff in error complains is within the category of an excise or duty.

The doctrine contained in the first part of this sentence, now for the first time announced in this extreme form and positive manner, is obviously *dictum* still. May not the second part of the sentence also be considered *dictum* in so far as it does not apply to the case at issue? It was in order for the court to sustain the tax in its application either to professional earnings or to

<sup>1</sup> 158 U. S. 635.

<sup>2</sup> 102 U. S. 586.

<sup>3</sup> 157 U. S. 578, 579.



interest on government bonds; but the language of the opinion is so general that there is nothing to show which part of the tax was really sustained. Where there is such uncertainty, there is nothing to bind the court in future decisions. If it had been clearly and necessarily decided in the Springer case that a tax on income from United States bonds was indirect, the decision of 1895 would be a reversal of that much of the decision. But it was not so decided; and as Mr. Chief Justice Fuller remarked, "We are considering the rule *stare decisis*, and we must decline to hold ourselves bound to extend the scope of decisions."<sup>1</sup> Certainly the income tax cases of 1895 do not reverse any decision sustaining a tax on professional earnings; that part of the income tax of 1894 was not annulled on the ground of unconstitutionality, but only because other parts of the tax were held to be unconstitutional, and the tax was evidently intended as an indivisible whole.

But even if this decision were a reversal of the Springer case, and to that extent a breach of the rule *stare decisis*, it would be abundantly justified by the new light thrown upon the subject by the historical researches of counsel and court. These scholarly investigations form a striking contrast to the somewhat hasty consideration of the Springer case, which seems not to have been presented to the court in the most thorough manner possible. Mr. Springer cited numerous political economists in support of the economic definition of direct taxes, but the historical evidence was comparatively meager. The assistant attorney-general, *contra*, submitted a remarkable brief, in which, blindly following the lead of his predecessor in *Scholey vs. Rew*, it was attempted to prove the income tax indirect by a spurious reference to Roman law! Gibbon's *Decline and Fall* was cited as authority that the Romans recognized only land and capitation taxes as direct taxes; but the only foundation for this important discovery was a footnote or two in which the editor of Gibbon made his own classification of the Roman taxes.\*

<sup>1</sup> 157 U. S., 579.

\* The reference was "1 GIBBON'S *Decline and Fall*, chap. vi. on pp. 190 *et seq.*" The footnotes are Smith's, and are found in Harper's edition at pp. 416-423.

The decision of the court also was vulnerable at more than one point. It rested upon the *dicta* of the four preceding cases; and the astounding assertion was made that "all these cases are undistinguishable in principle from the case now before us, and they are decisive against the plaintiff in error." As in *Veasie Bank vs. Fenno*, the court supported its conclusion also upon the mere circumstance that Congress had never as a matter of fact apportioned any taxes except upon real estate and slaves. According to this mode of proof, if no taxes had ever been apportioned, there would have been no direct taxes; and on the other hand, the rule of uniformity, as distinguished from apportionment, would be applicable only to those taxes to which it had actually been applied. No new form of taxation would be possible under either rule. The court was at great pains to exclude the income tax from Hamilton's enumeration of direct taxes in his Hylton case brief, by arguing that it was not a tax upon the "whole personal estate," but only on the income during a year, or a small part of the estate; and yet in the concluding *dictum* Hamilton's authority was entirely rejected. Attention has sometimes been called to the fact that the tax involved in this case was a war measure, which the court would naturally be very reluctant to annul; but it is even more significant that the case was decided long after the law in question had been repealed, when an adverse decision would have served no useful practical purpose at all comparable with the resulting confusion. It is impossible that this consideration should have had no influence with the court. It was the wrong time to make a test case; and this should be considered in estimating the weight to be attached to the decision as a precedent.

From our present point of view the apportionment of taxes according to population seems distinctly unjust, and it may be conceded that it can never again be resorted to unless to avert impending disaster. Yet it is not difficult to see why the comprehensive rule requiring apportionment of all direct taxes was inserted in the Constitution. There was as yet little sense of national unity; the Union was only just emerging from the

Confederation. Where relations to the general government were concerned, the states, and not individuals, were still regarded as the units; and the circumstances of the compromise made it natural that the rights of the states should be more carefully considered than absolutely equal justice between citizens of different states. Moreover, the founders of the Republic were deeply imbued with the idea that taxation and representation should go together. The provision for apportioning direct taxes was a practical improvement upon the plan of requisitions in force under the Confederation,<sup>1</sup> and it was calculated to prevent the particular abuses then most feared. And finally, as was pointed out in the constitutional convention, the inequalities of fortune were then so inconsiderable that apportionment involved no great injustice even as between individuals.

At last we have an interpretation of the constitutional rule of taxation reached after the most thorough research by counsel on both sides and by the court itself, and based not upon *dicta*, but upon all the historical evidence obtainable and upon the plain meaning of the language employed. For those who object to the decision as a dangerous infraction of the rule *stare decisis* to hope that this decision itself may be reversed, is the height of inconsistency. The mode in which the decision was reached is perhaps more open to criticism than the substance of the decision itself. It was based largely upon the idea that the words of the Constitution ought to be taken in their "natural and obvious sense," and yet it was reached by the roundabout process of declaring taxes on real and personal property to be direct, and taxes on the income from property to be equivalent to taxes on the property itself. This manner of reasoning may have been necessitated by the differences of opinion in the court itself, and by the desire to avoid even the appearance of overruling former opinions; but it would certainly have been much simpler, and as completely in accord with the "natural and obvious" meaning of words, to say that the income tax was

<sup>1</sup> BULLOCK, *Finances of the United States from 1775 to 1789*, pp. 153-164; *Political Science Quarterly*, vol. xv. p. 218.

direct because it was an income tax. It might then still have been possible to impose separate taxes on most of the constituent parts of income, somewhat after the manner of the English income tax; for, as we have seen, a partial tax need not be considered direct because a general tax of the same kind is. A system of separate taxes, even if it affected nearly all kinds of income, might have been separately declared to be indirect with a much less violent stretching of terms than was required in the Springer case, for example, in calling the income tax as a whole an excise or an indirect tax. But the opinion of the court as it stands since 1895 seems to preclude the taxation of income from property as such.

### III.

The desirability of an income tax is a distinct question; but here also there is much confusion of thought. An impression seems to prevail that there is some peculiar virtue (or vice) in an income tax which makes it, even when levied at a proportional rate, an instrument for bringing about a greater equality between rich and poor. This impression is due largely, no doubt, to the very generous exemption in the income-tax law of 1894; but exemptions are equally applicable to other direct taxes. The fact is that an income tax is no more favorable to the poor than many other forms of taxation. Its abstract justice is defeated by its practical defects, some of which it seems impossible to remedy. It falls most heavily not upon the largest incomes, but upon those whose amount can be least readily concealed. The man with a salary cannot escape; the man of wealth can, according to the elasticity of his own conscience. The income tax punishes honesty and puts a premium upon perjury. There is nothing in the nature of the tax which makes it easier to assess justly than the state taxes on personal property; the superior federal administration might save it from becoming a farce (as the still better administration of Prussia makes it a partial success), but could never make it operate equally. The comparative success of the Civil War income tax in its early years was due chiefly to the extraordinary patriotism of the war

period, which would not even question the constitutionality of the tax as long as the war continued. As soon as the war was over the receipts suddenly began to dwindle away.<sup>1</sup> Even the English income tax, with its principle of taxing each constituent part of income at its source, is weak in one of its most important parts, where that expedient is not practicable.<sup>2</sup>

It remains to consider what sources of revenue are still open to the national government. The customs and the internal revenue are usually sufficient for its needs, but among those who regret the annulment of the income tax are many who hope to see protective tariffs disappear. Even this change of policy, however, need not be accompanied by any very great diminution of the customs revenue, as the history of free trade in England abundantly proves. It is possible that a tariff for revenue only might be made quite as productive as a tariff for protection. As for the internal-revenue system, the war revenue act of 1898 gives an idea of some of the ways in which it is capable of extension in an emergency, without resorting to the taxation of incomes, and without imposing any very severe burdens upon anyone. It was only necessary to increase the very light taxes on malt liquors and tobacco and to levy new taxes on a few kinds of business, on certain business documents and proprietary articles, and on legacies. A tax was also levied on mixed flour, but this was for purposes of regulation. In studying this act nothing is more noticeable than the large number of possible sources of revenue which were passed over because they were not needed. For example, the tax on the gross receipts of corporations, proposed by the senate finance committee, if it had not been limited to refineries and pipe-line companies, would have produced a large revenue; and corporations engaged in interstate business would seem to be particularly appropriate for federal taxation, because the interstate complications which arise from their taxation by the commonwealths would be avoided,

<sup>1</sup> See WELLS, *Theory and Practice of Taxation*, p. 528.

<sup>2</sup> Cf. HILL, *The English Income Tax*, chap. 7. (*Economic Studies*, iv. pp. 367-388.)

and because taxation and regulation would go together.<sup>1</sup> It may even be that the trust problem could be partly solved by means of a system of progressive taxes on corporations.

There are various parts of the war revenue measure which may well be retained as permanent features of the internal revenue system. For example, there is no widespread demand for the abolition of the tax on sugar and oil companies, even if other corporations are not to be included with them; and so far as a business is in the hands of a monopoly, a tax on the gross receipts is not necessarily shifted to the consumers.<sup>2</sup> The legacy tax seems not to have had the anticipated result of discouraging the states from imposing similar taxes, and as the inheritance taxes levied by the states are never heavy and seldom apply to direct heirs, there is little cause for complaint in the addition of a federal tax. Even the stamp taxes, though they involve some inconvenience, seem on the whole to be paid willingly. But above all, the increased taxes on tobacco and liquors should be retained, though perhaps with some modifications. These taxes are free from the principal objections to indirect taxes in general; they are levied on articles of voluntary use, and they are apt to come partly, at least, out of the profits of the manufacturers and dealers, who enjoy a partial monopoly.<sup>3</sup> In so far as a tax increases retail prices, the effect is partly to diminish the amount consumed, which is not altogether to be regretted in the case of these particular luxuries, and partly to tax the consumers, to which there can be no objection unless the burden be unjustly distributed. Now the distribution of taxes on liquor and tobacco is doubtless more just than that of taxes on the consumption of necessities; indeed,

<sup>1</sup> Cf. ADAMS, *Science of Finance*, p. 496; "The Federal Taxation of Interstate Commerce," *Review of Reviews*, February 1899.

<sup>2</sup> Cf. SELIGMAN, *op. cit.*, pp. 286-288. It seems quite impossible to say whether or to what extent this tax actually has been shifted to the consumers. Since it was imposed the general tendency of prices has been upward in petroleum, but downward in sugar; but in neither case was there any increase of price at the time the act was passed or for some weeks thereafter.

<sup>3</sup> Cf. HOWE, *op. cit.*, p. 256.

Professor Neumann found from an examination of a large number of household budgets that in Germany the taxes on tobacco and wine at least actually took a smaller percentage from the incomes of the poor than from those of the rich and well-to-do.<sup>1</sup> In order to insure a just distribution of the burden, however, the taxes should be levied on an *ad valorem* basis, or at least differentiated according to quality.

There are many other possible sources of federal revenue, but it is not likely that they will be needed. The carriage tax might be reimposed and extended to automobiles; and there are many other articles of luxury, from yachts to billiard-tables, which might be made to contribute something, as they have in times past. The house tax of 1798 was levied as part of an apportioned direct tax; but the analogy of the Hylton case would seem to indicate that an unapportioned tax on rentals levied on the *occupiers* might be sustained as a tax on consumption, and therefore indirect. If so, it could be made a very fruitful source of revenue; and with the aid of progressive rates, it might be so contrived as to tax individuals approximately in proportion to their incomes.

If, notwithstanding all these latent resources, it should still be considered that a direct income tax ought to be levied—the Constitution points out the ways by which it may be amended. This is not an easy thing to accomplish, but it has been done, and to say that it cannot be done again is equivalent to saying that there is no strong, general demand for the change. It may be thought that a rejection of the rule of apportionment would be especially difficult to carry because of the opposition of those states to which the rule gives an advantage; but this consideration loses its weight when once it is thoroughly understood that taxes are never again to be apportioned in any case, unless possibly as a last resort in some great emergency. It would not be a question between apportioned and uniform direct taxes, but between uniform direct taxes and indirect taxes. A referendum would at any rate have an educational effect which

<sup>1</sup> *Zur Gemeindesteuerreform in Deutschland*, p. 18.

would make it worth while, whatever the outcome. It would be better under any circumstances to amend the Constitution than to misinterpret it; but when, as has sometimes been done, it is deliberately proposed to change its interpretation by "packing" the supreme court, and so subjecting that high tribunal to the vicissitudes of party politics, it is time for all good citizens to protest, and to point out the better way.

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## THE FOREIGN TRADE OF THE UNITED STATES FROM 1820 TO 1840.<sup>1</sup>

### II.

THE export of first importance during the third decade of the century was cotton. Its value for the ten years was 256 million dollars. This was 48 per cent. of the total value of domestic exports and 44 per cent. of the value of all imports retained for home consumption.

The cotton crop for the year 1820 was 160 million pounds.\* As cotton picking usually began in August, the period within which the crops were marketed probably coincided pretty closely with the succeeding fiscal year, which then opened October 1. The exports for the fiscal year 1821 were 78 per cent. of the crop in 1820. The crop increased to 180 million pounds in 1821, but the European demand was growing so fast that our exports in the fiscal year 1822 absorbed 99 per cent. of this 20 million pounds increment. This would indicate that practically all the increase in the demand for home consumption was satisfied from reserve stocks. The probability that this home demand was not increasing very rapidly is suggested by the fact that the export price, which had been 16½ cents in 1821, was increased only ½ cent by the remarkable growth of the European demand.<sup>3</sup> These prices seem to have been high enough to encourage the extension of cotton planting, for the crop in 1822 was 210 million

<sup>1</sup> Part I was published in this JOURNAL, vol. viii. No. 1, pp. 34-57. The authority for all statements in this article, as to the quantity and value of exports and imports is the *United States Reports on Commerce and Navigation*. The tables in the appendix give the most important facts in a form convenient for reference.

<sup>2</sup> The figures on the production of cotton are those found in the report of Secretary of the Treasury Woodbury, dated Feb. 29, 1836. *Executive Document XXIV* Congress, first session, vol. iv. No. 146, p. 7.

<sup>3</sup> This does not mean that the manufacturers were not prospering, or that their consumption of cotton was not rapidly increasing, but it does point to the fact that this was the period in which household manufactures were rapidly declining.

pounds. In the next fiscal year 97 per cent. of this 30 million pounds increment in the crop was exported. It was necessary to reduce the export price to  $11\frac{1}{4}$  cents in order to market such a quantity abroad. Evidently domestic demand was still sluggish. Either these low prices discouraged the planting of so large an acreage, or 1823 was an unfavorable crop year, for the production declined to 185 million pounds. Our own cotton factory system had now developed to a point where its consumption began to be of more influence in the market. In 1823 but 17 per cent. of the crop of the previous year had been retained for home consumption, but in 1824 23 per cent. was retained. This made necessary a decrease in the quantity exported amounting to over 30 million pounds. England increased her imports from other sources over 17 per cent in the calendar year 1824. But, in spite of that, her demand was so active that the decreased supply from the United States in the fiscal year 1824 was valued at  $15\frac{1}{4}$  cents a pound. Because of this increase in price the 143.4 million pounds exported in 1824 were worth more by 1.5 million dollars than the 173.7 million pounds exported the previous year.

The influence of a higher price upon the amount produced is at once observed. The crop of 1824 was 30 million pounds larger than that of 1823 and five million pounds in excess of that in any previous year. It came upon the market just in time to reap the benefit of the abnormal demand resulting from the great speculative movement in England in 1824 and 1825.<sup>1</sup> The high prices resulting from the speculation in England discouraged purchases by our own manufacturers and those of France. However, exports to England alone increased over 42 million pounds in the fiscal year 1825, and the export price for the year was  $21\frac{1}{4}$  cents. The value exported to England in 1824 was 15 million dollars, in 1825 30 million dollars. The

<sup>1</sup>On the speculative movement in prices in England in 1824 and 1825 see TOOKE's *History of Prices*, vol. ii. pp. 142-146. On page 144 he says: "Cotton, from its importance, and from its affording, in the first instance, the fairest grounds for investment, became a prominent object of speculation on the most extensive scale, and at exorbitant prices."

increase in the total value of cotton exported was 59 per cent. There was no increase in the exports to other countries. The high prices greatly stimulated the opening up of new plantations and the crop of 1825 amounted to 255 million pounds, or 40 million pounds more than that of the previous year. The speculation in England had collapsed before any considerable part of this crop had been marketed. Fortunately, the stocks held in the United States were very low, and the brisk domestic demand enabled the planters to sell considerable quantities of the new crop in the fall of 1825 at quite high prices. A southern newspaper quoted in *Niles' Register*, gives the ruling price for cotton in the South during 1825 as 20 cents.<sup>1</sup> England, however, was holding large quantities of the cotton purchased during the speculative movement, and cotton could not be sold there without great reductions in the price. Nevertheless, in spite of the fact that France imported twice as much as in the preceding year, and that the amount retained for home consumption increased nearly one third, it was still necessary to sell 134 million pounds in England during the fiscal year 1826, at whatever price could be obtained. The consequence was that the export price for the year fell to  $12\frac{1}{4}$  cents. But the influence of the English cotton speculation on the fortunes of the southern planter had not yet exhausted itself. As we have said before, the ruling price in the South during 1825 had been about 20 cents. Elated by this high price, and with their customary blindness to the effect of oversupply on prices, the planters in the spring of 1826 seem to have put every available foot of ground into cotton. The result was a crop of 350 million pounds, an increase of 95 million pounds over that of the preceding year. The planter got from  $6\frac{1}{4}$  cents to  $12\frac{1}{2}$  cents for this crop, and ought to have considered himself fortunate, for, in order to dispose of it at all, it was necessary to export to France twice as much as her average import in 1824 and 1825, and to England more than twice as much as she had taken in 1824.<sup>2</sup>

<sup>1</sup> *Niles Register*, vol. xxx. p. 161.

<sup>2</sup> Secretary Woodbury gives the average price of cotton in 1826 as 11 cents.

The decreased price resulted, as was to be expected, in a very large decrease in the crop for 1827. Its amount was but 270 million pounds. The importations of Europe, however, had been far beyond her capacity for consumption and in consequence our exports fell off even more than the crop. The decrease in the crop was 80 million pounds; in the exports 84 millions. This great decrease in production had hardly kept pace with the decreased demand for that year, and, as a consequence, the export price fell from  $12\frac{1}{4}$  to 10 cents. Yet, for some reason, the planters thought fit to increase their output again, and the crop for 1828 amounted to 325 million pounds. They were not too sanguine in their operations if the prices they had been receiving were satisfactory, for the additional exports in 1829 absorbed the entire 55 million pounds increment in the crop at a slight increase in price. Encouraged by this rapid revival in the demand the planters again increased their acreage and the crop for 1829 was 15 million pounds in excess of the great crop of 1826, and 40 millions in excess of that of the previous year. There was very little change in prices, yet exports increased 34 million pounds.

Can we obtain any information in regard to the conditions governing cotton production and exportation in the United States from the data just passed in review? It is evident that for 1825 and 1826, they were indicative of speculative conditions in England, quite as much as of economic and industrial conditions in the United States. It will be easier, therefore, to deal with the years in which such complications do not have to be considered. During the years 1821-1824, 586.7 million pounds of cotton were exported. Its export valuation, as returned by the custom-house officers, was 87.49 million dollars. During the years 1827-1830 the quantity exported was 1068.2 million pounds, and its value 108.1 million dollars. We had increased the quantity exported 82 per cent. but while doing so had increased the value received in return only  $23\frac{1}{2}$  per cent. The improved conditions for cotton production in the United States had reduced its price about five cents, or nearly one third. This improvement in conditions had

been brought about by the opening up of cheaper and better lands, by the increase in the number of slaves and the reduced cost of maintaining them, by the reduced cost of packing and transporting the cotton, and by the general reduction in the price of commodities purchased by the planters.

How fast the opening up of new plantations was being carried on is indicated by the fact that within the settled area west of Pennsylvania and south of the Potomac the density of the population actually decreased from 1820 to 1830.<sup>1</sup> Mr. M. B. Hammond says:

In the decade ending with 1820, the superiority of the prairie lands and river bottoms for cotton growing began to be appreciated, and by 1830 the western country had outstripped the eastern states in production. . . . In 1811,  $\frac{1}{4}$  of the cotton crop was raised in the Atlantic coast states, Virginia, North Carolina, South Carolina and Georgia, and in 1821 these states still produced over  $\frac{3}{4}$  of the total crop. Five years later, however, the states of Alabama, Mississippi, and Tennessee almost equaled the Atlantic coast states in cotton production, having raised over  $\frac{1}{2}$  of the entire crop grown that year, and by 1833 they were in the lead, producing  $\frac{1}{11}$  of the entire crop.<sup>2</sup>

One does not get a full appreciation of the expansion of cotton planting territory from these quotations. Mr. Hammond has included Georgia among the older states, but the increase of occupied area in that state was probably as great during this decade as in any other southern state except Tennessee. The increase in her white population was 107,000, in Alabama's 105,000, in Tennessee's 196,000. The increase was far below 100,000 in every other southern state. Moreover, the lands occupied in 1820 were in the northern and eastern sections of the state, and were not adapted to cotton culture, while those in the southern and western parts of the state, taken up during this decade, were first-class cotton lands. I have already mentioned the considerable increase of the cotton crop in 1825 as an indication that many new plantations were being opened up. According to contemporary estimates the cotton crop of Georgia increased 38 per cent.

<sup>1</sup> *United States Census Reports*, 1880.

<sup>2</sup> M. B. HAMMOND, *The Cotton Industry*, p. 70. *Ibid.*, p. 247.

in that year, that of the gulf states 25 per cent., and that of South Carolina only 16 per cent.<sup>1</sup>

That the decrease in the price of cotton was largely due to the competition of these fresh fields is further evidenced by the restriction of production in South Carolina below the capacity of the state at higher prices. The extent of this restriction is indicated by the great increase in the product of that state in 1826, evidently in consequence of the high prices obtained from the previous crop. Her increase in that year was 52 per cent., while that of the western states was but 31 per cent., and that of Georgia only 23.<sup>2</sup> All these indications seem to warrant the conclusion that the cheaper and better lands of the new plantations were very largely responsible for the reduced cost of production. The extent of the exodus to these lands may be emphasized by further reference to the *Census Report*. The increase of the white population of South Carolina was only  $8\frac{1}{2}$  per cent. or less than  $\frac{1}{4}$  the rate for the entire country. The increase in Alabama and Mississippi was over 100 per cent. The absolute amount of increase in Tennessee was nearly ten times, and that in each of the states, Alabama and Georgia, was over five times as much as in South Carolina.

It is probable, however, that even South Carolina was able to push the production of cotton upon fields that could not have been profitably cultivated in former years. The increase in the planter's stock of negro laborers made it possible for him to cultivate an increased area at a less cost. The increase in the average planter's stock of slaves is shown by the fact that while in 1820 but 32 in every 100 persons in the state were slaves, in 1830 they had increased to 36 in every 100. The rapid opening up of plantations in the southwest was, however, the more important effect of the general increase in the number of slaves. The extent to which the increase was used in this way is indicated by the fact that while the white population in the

<sup>1</sup> *Niles*, vol. xxxii. p. 63. The totals given in *Niles* indicate plainly that they apply to the crop years 1824 and 1825.

<sup>2</sup> *Niles*, vol. xxxiii. p. 217.

Gulf states increased 74 per cent. during the decade, the number of slaves showed the remarkable gain of 158 per cent.

Not only did the cotton planters have more slaves, but the individual slave was a source of less expense to his owner. The food of the slaves was never a great expense, as they were expected to raise their own to a large extent, but the masters had to provide material for their clothing. The material generally used was called negro cloth. The price of this cloth was 50 per cent. less in 1830 than in 1815, and from 20 to 25 per cent. less than in the first half of the decade.

Although the prairie lands and river bottoms of the West were much more productive than the plantations in South Carolina, this alone could not have brought those located in Tennessee and northern Alabama under cultivation had it not been for the great reduction in the cost of transportation during the decade. This reduction had been brought about to a large extent in the South and West by the use of steamboats. The number of these boats in use on the western rivers was 72 in 1820 and 213 in 1830.<sup>1</sup>

The other expenses connected with marketing the cotton had also been reduced. The cost of cotton bagging in 1830 was less than half what it had been in the early twenties.<sup>2</sup> A similar reduction had also taken place in the price of the strap iron used for cotton ties.

Cheaper transportation had decreased the planter's expense for supplies in general, as well as the cost of marketing his product. Moreover, in 1830, the factories of Pittsburg and Cincinnati were supplying the Southwest with machinery, steam engines, furniture, etc., at prices in those towns below what many of the same articles would have cost in Philadelphia or New York ten years before, and, of course, very much below Pittsburg and Cincinnati prices at that time.<sup>3</sup> Some instances of changes in Pittsburg prices will illustrate the extent of this decrease. In 1820 the price of bar iron was \$200 a ton, in

<sup>1</sup> *Niles*, vol. xxxviii. p. 97.

<sup>2</sup> *Niles*, vol. xxxviii. p. 140.

<sup>3</sup> *Ibid.*, pp. 292, 293.

1830 \$100 a ton. Prices of boiler iron for the given dates were respectively \$350 and \$140 a ton; sheet iron \$18 and \$8.50 a cwt.; hoop iron, \$250 and \$120 a ton; axes, \$24 and \$12 a dozen; other farm tools, steam engines, stoves, etc., from one third to one half as much in 1830 as in 1820. The average price of sugar in Philadelphia in 1820 was \$10.50 a cwt., in 1830 only \$7.62. Sheetings, the factory price of which was 18 cents in 1820, were sold for 8¾ cents in 1830.\*

It was the reduced cost of production brought about by the conditions that have been passed in review, that caused the increase of our cotton crop from 160 million pounds in 1820 to 365 millions in 1829, in spite of the decrease of 33⅓ per cent. in its price per pound. It would seem, indeed, that a man starting in the business in 1830 would have obtained a higher profit than one engaged in it in 1820, had it not been for the single item of increased cost of slaves.† The conditions that made 10-cent cotton a possibility in the United States from 1826 to 1832 were of special importance because the low price of this cotton in connection with its excellent quality established our position as the source of supply for the cotton manufacturers of Europe. Moreover, it gave the increase in the consumption of cottons throughout the world such an impetus that in the eight years following 1832, in spite of the great increase of raw cotton production, its average export price was over 25 per cent. higher than in 1832.

The protection afforded the cotton manufacturers of the United States by the tariff, was effective in bringing about this increased demand for cotton. The difference between the total cotton production for the years 1820–1824 and the total exports of the years 1821–1825 was 188 million pounds. This must correspond roughly to the amount of home consumption during the first half of the decade. Estimated in the same way it amounted to 292 million pounds during the second half. This indicates an

\* *General Convention of the Friends of Domestic Industry assembled at New York October 26, 1891. Reports of Committees*, pp. 18, 71, 114.

† HAMMOND, pp. 51, 52.



increase in the home consumption of about 55 per cent.<sup>1</sup> This increase was by no means in proportion to the increase in the capacity of the factories, it must be remembered that during this period the household manufactures gave up to a large extent their unequal contest with the power looms. The manufacturers had been generally prosperous. They usually ascribed such trouble as they had to excessive competition and overproduction among themselves. One of them thus describes the conditions prevailing shortly before the passage of the tariff act of 1824: "By the present tariff, cotton yarn, as fine as No. 30, and the goods made out of such yarn, is fully protected, as it regards foreign competition; but in consequence of the business being good in the years 1820, '21 and '22, capitalists were induced to invest their money so plentifully, and spindles and looms multiplied so rapidly, that the consumption could not keep pace with them; in consequence, the domestic competition has rendered the business a losing one, and cotton goods of the description stated are sold . . . cheaper than they can be imported free of duty."\* A North Carolina editor expressed the opinion in the fall of 1825 that cotton was 4 cents a pound higher than it would have been, if there had been no demand from the Northern manufacturers. It is hardly necessary, however, to quote opinions to convince one that the demand of customers who took 20 per cent. of the whole crop in the first half of the decade and 19 per cent. in the second must have had a very decided effect on the price.

In closing the study of cotton production and exportation, the facts deserving emphasis may be summarized as follows: The differential advantages of the United States as a producer of cotton were greater than in any other line; these advantages were so increased during the decade that cotton planting was probably as profitable throughout the country in 1830 as in

<sup>1</sup> Ellison makes the increase in our consumption about 46 per cent. But it is not probable that he has taken into consideration the cotton that was shipped up the Mississippi River for consumption in the West. T. ELLISON, *Cotton Trade of Great Britain*, p. 100.

\* *Niles*, vol. xxv. p. 290.

1820. This ability to produce at a low price at that time was of special importance, because it secured our position as the source of supply for European manufacturers. The great increase in the production of cotton had caused a similar increase in the demand for the slaves raised in the border states, and the foods and other commodities produced in the upper Mississippi valley.

The export next to cotton in importance was tobacco. Its value for the decade was 56.9 million dollars, or but little over one fifth as much as that of cotton. The value exported in 1830 was less than that in 1820. The value in the first five years was 1.4 million dollars more than in the last. The quantity exported in the first half of the decade was 403,000 hogsheads, in the last 421,000. These figures indicate that if the United States should have increased the quantity of her tobacco exports materially, it would have been as disastrous to the price as were the increased exports of cotton. Holland and England, who were our leading tobacco customers, both took less tobacco in the last half of the decade than in the first. France increased her purchases, but the change is to be attributed in part to our increased indulgence in the wines and silks of that country. Evidently the high-priced slave labor resulting from the expansion in cotton production restricted the planting of tobacco so that the area devoted to its culture did not generally increase much faster than the domestic demand. The variation both in the price and the quantity of exports from year to year were such as would be expected from favorable and unfavorable crop years rather than from any permanent change in the conditions of supply and demand. The decrease in the price of tobacco indicated that the domestic demand measured in money did not increase during the whole decade quite as fast as the supply, and that other sources of supply were opening up about as fast as the demand abroad increased. However, if we compare the two halves of the decades, it appears that the better facilities for transportation and the cheaper machinery and other supplies had enabled tobacco planters to decrease the money cost of production in spite of the higher cost of slaves. The price of tobacco

had not decreased so fast as prices of other commodities, or, in other words, the demand for tobacco measured in other commodities was growing faster than the supply. The increased cost of the slave was the most effective single factor in restricting the production of tobacco, but when the inelasticity of the demand for that commodity is taken into consideration this seeming misfortune of the tobacco planters must be counted a blessing in disguise.

Flour was the agricultural export third in importance. The shipments during the decade amounted to 9,120,000 barrels, valued at 49.1 million dollars. The exports for 1821-1825 were 4,460,000 barrels, valued at \$5.46 a barrel; for 1826-1830 4,660,000 barrels, valued at \$5.24 a barrel. The second half of the decade yielded a slightly increased total value of exports, but at a slight decrease in the price received.

The inspections reported for 1821-1825 were 8,460,000 barrels and for 1826-1830 11,451,876 barrels. This indicates that the domestic market for flour had increased in importance much faster than the foreign, since the exports in the first period were 53 per cent. and in the last period but 41 per cent. of the inspections.<sup>1</sup> The inspections indicate quite plainly the importance of the Erie canal to the flour trade. Before its opening in 1825 there was no increase and in two years out of the three a decline in the amount inspected. After the canal was opened every year of the decade showed an increase in the amount of inspection. The total in 1830 was 67 per cent. larger than in 1821. The importance of the canal is further emphasized by the increase in the value of the land in its immediate neighborhood, which is said to have amounted to forty or fifty million dollars in five years.<sup>2</sup> But the inspection returns indicate that this improvement in transportation facilities was by no means confined to New York state. This is shown as well by figures

<sup>1</sup> The states that had an export trade in flour usually had laws requiring its inspection. The figures given above include the inspections at New York, Albany, Philadelphia, Baltimore, Georgetown, D. C., Alexandria, Fredericksburg and Falmouth, Richmond, Petersburg, and New Orleans.

<sup>2</sup> *Niles*, vol. xxxviii. p. 362.

on the actual construction of canals. In 1830 New York state had 564 miles of completed canals, Pennsylvania 480 miles, Virginia 120 miles. There were 70 miles completed in the West, 72 in New England, and 43 in the South.<sup>1</sup>

The West Indies had been our most important customer for flour during the decade. Among them Cuba was the first in importance, the Danish West Indies and Hayti second and third. South America ranked next to the West Indies in the amount of flour taken. However, the exports to both of these customers were decidedly less in 1826-1830 than in 1821-1825. The exports to England had been of but very little importance till 1829. It was only the exceptional demand from that country in the last two years of the decade that prevented the exports in 1826-1830 falling decidedly below those in 1821-1825.

Turning to a more detailed study of the reports we find that the quantity exported in 1821 was greater than in any other year except the last. Any increase in price was accompanied by a sharp fall in the amount exported, and when prices declined again the old foreign markets were not regained. It would seem that the conditions of production were such that competition did not act as in the case of cotton to increase output in prompt response to every increase in price. The conclusion must be that in spite of some improvement in facilities for transportation the United States had not materially advanced her position as a producer of wheat flour for the world market. It does not follow from this that the condition of the wheat farmer was not greatly improved. The ruling value of wheat in other commodities was higher in the last part of the decade than in the first. The time and labor cost of producing and marketing it was considerably decreased, and in response to the increase of the consumption demand we find a steady increase in the amount of its annual production.

Among the agricultural exports, the various products of animals rank next in importance, though their total value for the decade was only 26.5 million dollars, or but 46 per cent. of that of

<sup>1</sup> *Niles*, vol. xxxviii. p. 433.

wheat flour. There are not sufficient data as to prices to render their presentation or discussion of any value. These exports in the last half of the decade were \$100,000 in excess of those in the first half. So far as animal products were concerned the United States was practically of no more importance in the world market in 1830 than she had been in 1820. When we take into consideration the great increase in the number of farms it becomes evident that this part of our export trade had suffered a great decrease in importance from the individual farmer's point of view.

The report for rice was of a more satisfactory character to the planters. The total value exported in 1826-1830 was 11.4 million dollars, which was 31 per cent. more than that for the first five years. This increased value of total exports had resulted from an increase in the total amount exported in the second half of the decade by 47 per cent. The southern planter had seen a relatively greater increase in the total returns from this product than from cotton, yet the quantity of rice exported had increased but little more than half as fast as that of cotton. Practically all the increased export of rice went to Europe. Holland, alone, increased her imports by over 160 per cent. The increase in France was just 100 per cent., while the other countries of central Europe all imported more. England did not increase her imports, and there was practically none exported to Spain or the other Mediterranean countries. The shipments to the West Indies were of considerable importance, amounting to nearly three eighths of the total in the first half of the decade and to nearly one third in the last half.

Corn and corn meal are the only exports that show an increase in/price. In the first five years 3,520,000 bushels exported were valued at \$1,870,000, while 3,530,000 bushels exported in the second half were valued at \$2,010,000. The export value of 760,000 barrels of meal in the first half was \$2,180,000; in the second half 780,000 barrels were valued at \$2,400,000. These figures enforce the fact even more strikingly than those on the flour export, that even if there had been a

demand from abroad at the ruling prices the transportation facilities of the United States had not yet brought the rich field of her interior near enough to the seacoast so that she could take her place as a producer of breadstuffs for the world at large.

The most remarkable showing of the decade was undoubtedly that made in the exports of manufactures. In every year of the second half of the decade the exports for 1821 were exceeded by over 100 per cent. No year failed to show an increase in the annual export until 1828. The total export of manufactures for the decade, \$50,892,000, was exceeded only by exports of cotton and exports of tobacco. The increase of the second half of the decade over the first was \$11,718,000. The corresponding increase for the great staple, cotton, had been only ten million dollars, and the total exports of all other commodities had actually fallen off about three million. This increase in the exports of manufactures was to a large degree confined to articles familiarly known as "Yankee notions," cotton manufactures and gold and silver coin of our own minting.<sup>1</sup> "Yankee notions" must not be construed too narrowly, for the list includes such articles as printing presses, books and maps, glass manufactures, etc. These articles were not separately listed before 1826. The treasury reports show that exports of "manufactured articles not distinguished in the returns" increased from \$6,520,000 in the first half of the decade to \$14,834,000 in the second half. Manufactures such as soap, candles, boots and shoes, hats and caps, manufactures of wood, etc., which had been of sufficient importance to be distinguished in the returns for 1821 increased from an export of \$2,262,000 in that year to \$3,169,000 in 1825, but the export of these articles was less in 1829 and 1830 than in 1824 and 1825. Their total for the first half of the decade was \$13,535,000 and for the second half \$16,471,000. The largest gains in this second list were made in hats and caps and manufactures of iron, both of which increased a little over 100 per cent.

<sup>1</sup> This export of coin amounted to four million dollars in the last half of the decade. It is not separated from the other items in the first half.

The increase in exports of products of the sea in the second half of the decade was a little over half a million dollars, or between 6 and 7 per cent. The exports of products of the forest declined from \$21,938,000 to \$19,059,000. This was the only considerable decrease in any of the large divisions of our export trade, and the decrease was practically confined to the exports of ashes and naval stores. The former decreased from \$6,667,000 to \$4,226,000, and the latter from \$2,239,000 to \$1,843,000.

The value of the foreign goods imported in this decade (excluding gold and silver) was \$729,489,000. The value of the re-exports was \$162,009,000. The difference between these two amounts is \$567,480,000. This difference is sometimes spoken of as the value of the foreign goods retained for home consumption. In so using it one should remember that it is only a very crude approximation, and probably in most cases much below the real value. As an extreme instance of the errors that may arise from such a method of computing home consumption the case of spices in the first half of this decade may be cited. The difference between the quantities of spices imported and re-exported was five million pounds, and this probably coincided very nearly with the actual consumption of foreign spices in this country, yet the export value of the spices that were re-exported was \$144,000 in excess of the value of all spices imported during that period. This is a very extreme case of what always occurred in some measure. Nevertheless, crude as this approximation is, it furnishes us the best means we have for comparing total consumption of foreign goods in different periods. The imports of the precious metals during the decade had amounted to \$69,145,000, their exports to \$71,528,000.

The value of imports for the first half of this decade excluding gold and silver was \$369,233,000. The value of re-exports was \$85,587,000. The value of home consumption as indicated by these amounts is \$283,646,000. The corresponding amounts for the second half are \$360,256,000, \$76,422,000, and \$283,834,000. This would indicate an increase of less than 1 per cent. in the

quinquennial consumption of foreign goods. Moreover, a study of the returns in detail, has convinced me that this method does not give so great an undervaluation of the home consumption in the second quinquennium as in the first. The population had increased about  $15\frac{1}{2}$  per cent. Yet it is probable that the value of the foreign goods consumed was less in the second half of the decade than in the first. The larger consumption of foreign goods in the first quinquennium is in part explained by the marketing of the surplus stock of precious metals. The exports of gold and silver in that period were \$43,473,000, exclusive of the domestic exports which were not distinguished from other items until 1826. The imports amounted to only \$31,063,000. This indicates a net export of nearly 15 million dollars. On the contrary the imports of the precious metals in the second quinquennium was \$38,082,000, while the total exports were only \$28,055,000. That is, there was a net import of \$10,027,000.

The value of foreign goods consumed was less in 1821 than in any other year of the decade. The average individual consumption that year was between four and five dollars. The value of foreign goods retained for home consumption was greater in the aggregate and per capita in 1822 than in any other year of the decade, and amounted to nearly 70 million dollars. The conditions reviewed in a former article<sup>1</sup> explain sufficiently the small purchases in 1821 and the large increase in the next year was probably intended to bring the stock of foreign supplies to its normal proportions rather than to afford the means for extraordinary indulgence. Other years of large aggregate consumption of foreign goods were 1825 and 1828. The consumption in these years amounted to about 66 and 68 million dollars. These amounts probably indicate an actual increase in the use of foreign goods. The cause for this increase in 1825 was the very high price of cotton and its large sales to foreigners. In 1828 two causes were at work. The current balance on international account was in favor of the United States in part through her services as an ocean carrier and in part through the

<sup>1</sup>JOURNAL OF POLITICAL ECONOMY, vol. viii. No. 1, pp. 34-57.



sale of securities in Europe. In addition to this the prospect of the higher tariff duties passed that year encouraged large importations before the law should come into force. The effect of the law in discouraging the consumption of foreign goods is probably shown in the decline to an average of about 54 million dollars in 1829 and 1830.

The imports for this period naturally fall into three principal divisions, food products, miscellaneous commodities, and manufactures. The study of the importation and consumption of foreign food products will now be taken up in detail.

Foreign food products made up a little more than a fourth part of the aggregate value of imports in the first half of the decade. Their re-exports were a little less than a fourth part of all re-exports. The indicated value of foreign food products consumed was 69.6 million dollars. In the second half of the decade imports of foods declined in value eight, re-exports seven, million dollars, decreasing the value of the quinquennial consumption to 68.5 millions. As the population had increased about 15 per cent. this indicates a corresponding decrease in the individual consumption of foreign foods. Fortunately there was a record kept of the quantities of foods imported and re-exported which enables us to ascertain the facts as to their consumption much more exactly than they are indicated by the figures just given.

The indicated value of foreign wines consumed in the first half of the decade was \$6,312,000, in the second half \$6,589,000, an increase of a little over 4 per cent. But the difference between quantities of wine imported and re-exported which must represent very nearly the actual consumption, was 11,285,000 gallons for the first half of the decade and 13,626,000 for the second half. The real increase in consumption was therefore 2,341,000 gallons or 21 per cent. There had been an increase in the individual consumption of foreign wines instead of the decrease that would be inferred from the differences between the values of imports and re-exports. The error in this case arises from the increased consumption of the cheaper wines

imported from France and Spain, which of course did not produce a corresponding increase in the expenditures for wines. This increased importation of cheap wines had reduced the average import price from 55 to 50 cents per gallon.

The consumption of foreign spirits decreased from 20,374,000 gallons in the first half of the decade to 13,809,000 gallons in the second. The decrease in the approximated values was from \$11,334,000 to \$6,006,000. Here as in the case of wine there was a decrease in the price per gallon which would cause an inference as to consumption based on the decrease in the values to be incorrect. The most of the decrease in the consumption of spirits was the result of the tariff of 1828. The consumption in the years 1821-1823 was 11,683,000 gallons. In the first three years of the second quinquennium it was 11,134,000 gallons, a decrease of only 549 gallons. The consumption in 1824 and 1825 was 8,691,000 gallons but in 1829 and 1830 it had fallen to 2,675,000 gallons. That is of the total decrease amounting to 6,565,000 gallons, nearly 95 per cent. is found in the last two years. The duty on spirits had been increased 15 cents on the gallon, and although the import price was five cents lower for the years 1829 and 1830 than it had been for the two preceding years, the consumer was thus compelled to pay 10 cents more per gallon than formerly which probably accounts for this remarkable decrease.

Molasses was one of the most important of our food imports during this decade. The value consumed constituted nearly 16 per cent. of that of all foreign foods. The consumption in the first half of the decade was 59,671,000 gallons, in the second 58,973,000 gallons. The total decrease in the consumption of molasses was not nearly so striking as in spirits, but the influence of the tariff of 1828 was even more in evidence in the latter than in the former. In the opening trienniums of the two halves of the decade the consumption of molasses was 34,106,000 gallons and 40,614,000, an increase of 6,508,000. In the closing bienniums the consumption was 25,653,000 and 18,524,000 gallons, a decrease of 7,129,000 gallons. Comparing the consumption in

the last biennium with that of the two years preceding we find that the decrease amounted to 8,197,000 gallons. The duty on molasses had been increased five cents per gallon, and the drawback hitherto paid on exports, of rum made from foreign molasses, was withdrawn. A temperance movement inaugurated in 1826 was of sufficient extent to materially reduce the domestic consumption of rum and the rapidly increasing use of coffee operated in the same direction. As the United States was the principal customer of the West Indies for molasses this marked decrease in our demand caused a decline in the average import price from 21 cents in the two years 1827 and 1828 to  $13\frac{1}{2}$  cents in the years 1829 and 1830. This affords a very interesting illustration of legislation operating to reduce the demand for a foreign commodity and thereby causing a decrease in the import price of that commodity exceeding the increase in the duty paid by the domestic consumer.

The returns in regard to tea are decidedly interesting because of the very small changes from the first to the second half of the decade. The total imports fell from 38,969,000 pounds to 38,928,000 pounds. There was a very slight increase in the price, the total value increasing from \$12,060,000 to \$12,403,000. The greatest relative change was in re-exports which increased from 7,644,000 pounds to 8,629,000 pounds. The price of tea re-exported fell from 50 to 48 cents per pound. The domestic consumption decreased from 31,325,000 pounds to 30,299,000 pounds. That is, without any material change in the price the individual consumption of tea had fallen off about 15 per cent. This was not the result of more stringent economy but the direct consequence of the very great increase in coffee drinking.

Changes in the returns of the coffee trade from the first to the second quinquennium are as noticeable as was their absence in the case of tea. Coffee was easily the most important item among the imports of foods. It constituted more than one fourth of their whole value in both halves of the decade. In the first quinquennium nearly one half the value of re-exports was in coffee. The average import price, which was  $16\frac{1}{2}$  cents

in the first half of the decade, fell to  $9\frac{1}{2}$  cents in the last. In response to this fall in price imports increased from 168,832,000 pounds to 245,188,000 pounds. In spite of the lower price re-exports decreased from 81,496,000 pounds to 80,529,000 pounds and their value fell from \$14,182,000 to \$7,855,000. This loss in the value of re-exports of coffee made up over three fourths of the decrease in the value of all re-exports of foods. Estimating the value of the home consumption in the usual way we find that it increased from \$13,547,000 in the first half to \$15,377,000 in the second, or 13.5 per cent. This shows an increase smaller than that in population. But the quantity retained increased from 87,336,000 pounds to 164,659,000 pounds or 88.5 per cent. While the values would seem to indicate a slight decrease in the individual consumption of coffee in the United States, the quantities show that there was an increase from a consumption by the average individual, of about eight pounds to nearly fourteen pounds. The increased use of coffee was not caused by the reduction of price alone. The increasing demand for temperance beverages found in coffee an acceptable substitute for the rum used in former years. The partial substitution of coffee for tea was also due in part to other causes than the change in price. Coffee was the product of our nearest neighbors. It was necessary to go around the world for tea. The West Indians were glad to take our own products in exchange for their coffee. Indeed they usually paid us a balance in the precious metals. The people of the Orient had little use for our commodities and even without any increase in our consumption of tea they received much the larger part of our exports of gold and silver.

Sugar was the food import of second importance. Indeed, foreign sugar exceeded coffee in the value consumed in this country. The re-export of sugar was far less than that of coffee. In the first half of the decade the value of the re-exports of coffee had been over half the value of its imports, while the value of re-exports of sugar constituted a little less than one third the value of all imports of sugar. There was an increase

in the average import price of sugar from 5.7 cents per pound to 5.9 cents, if the customhouse returns are to be accepted. One suspects, however, that the West Indian planter did not receive so much for his sugar as the importer wished the consumers to believe that he did. Indeed, it was said at the time that sugars from Porto Rico were sold at so low a price in New York City that after paying freight and other expenses there remained but a cent a pound for the planter.<sup>1</sup> Furthermore the difference between the price reported by the importer and the price of sugar in the United States during 1830 was not enough to warrant the importations made in that year. But even if we suppose that the increased price of foreign sugar was a fiction of the importers the decrease in the price of sugar to the consumer in Philadelphia amounting to nearly 20 per cent. was quite sufficient to discourage the business of importing sugar.<sup>2</sup> It is a matter of no surprise therefore that the quantity of sugar imported fell from 374,782,000 pounds in the first half of the decade to 368,333 pounds in the second. The re-exports of sugar fell from nine to five million pounds, although their value fell only from 6.7 million to 5.3 million dollars. The domestic consumption of foreign sugars increased from 282,849,000 pounds to 316,092,000 pounds, or 11 per cent. This shows a decline in the individual consumption of foreign sugars, but the increase in the consumption of sugar produced at home probably more than counterbalanced it. The government encouragement of the sugar industry seemed to be quite effective during this decade. The largest crop of sugar in the first half of the decade was less than 30 million pounds.<sup>3</sup> The generally accepted estimate of the crop of 1828 is 88 million pounds although at that time, the claim was made that it amounted to 100 million pounds.<sup>4</sup> The important point, however, is the fact that while prices of foreign sugar had increased, the price of sugar in New Orleans had fallen over 25 per cent. This decrease in the

<sup>1</sup> *The Reports of Committees, Convention of Friends of Industry*, p. 72.

<sup>2</sup> *Ibid.*, p. 71.

<sup>3</sup> *Niles*, 1821-1825.

<sup>4</sup> *Reports of Committees, Convention of Friends of Industry*, p. 68.

price was undoubtedly due to the increase in domestic production. Nor can there be any question that the decision of the southern planter between the planting of cotton and sugar was often determined in favor of the latter when the former would have been chosen but for the duty of three cents per pound on the importation of foreign sugar.

The consumption of foreign fruits increased from 24,067,000 pounds to 32,458,000 or 35 per cent. This large increase in the consumption of foreign fruits was accomplished with only a fractional reduction in the import price. The quantity of re-exports remained practically the same but their value increased over 40 per cent.

In the first half of the decade over three fourths of all spices imported were re-exported and as has been noted before, the export value of that three fourths exceeded by \$144,000, the entire value of the imports. The quantity imported was 21,197,000 pounds. In the second half of the decade it increased to 24,092,000 pounds, while the re-exports fell from 16,116,000 pounds to 11,607,000 pounds. The domestic consumption increased from 5,181,000 pounds in the first half to 12,485,000 pounds in the second half of the decade. This great increase in the consumption of foreign spices was probably, in large part, due to the decline in the average import price from 12.6 cents to 9.4 cents per pound.

To sum up, in the last half of the decade the average American was using more of foreign wines, coffee, fruits and spices and less of foreign spirits, molasses, tea and sugar than in the first. He was obtaining all of these articles except tea at lower prices, and the rise in the price of tea was only one cent per pound.

Under the head of miscellaneous are grouped various raw materials and crude manufactures. Their increased importation was a good index to the rapid growth of our own manufactures during the period. The total value of these commodities retained for home consumption, was \$44,821,000 in the first half of the decade and \$44,275,000 in the last. The value of foreign indigo consumed increased from \$1,300,000 to three times that

amount. The consumption of dye and tropical woods increased from \$240,000 to \$1,340,000 or nearly sixfold. The largest item in imports of raw materials, raw-hides, increased from \$8,170,000 to \$9,090,000. In copper, brass and tin the increase was from \$3,800,000 to \$6,180,000. The treasury returns do not generally give the quantities of these imports. From those that are given it is to be inferred that there was a general decline in their prices. But even if prices remained the same it is evident that the domestic manufactures, in which the articles already mentioned were used, had been increasing at a much more rapid rate than the population.

The most notable decline in the imports of this group was that which took place in lead. The consumption of lead during the first half of the decade was valued at \$980,000, during the second at \$340,000. The price of lead, however, as indicated by our export price on shipments to France declined 50 per cent. from 1821 to 1830. The duty on lead under the tariff act of 1816 had been one cent per pound. In 1824 it had been raised to two cents, and in 1828 to three. The increase of the tariff in 1824 was followed by the rapid development of the lead mines on the upper Mississippi. In 1825 the production from these mines had amounted to less than half a million pounds, in 1829 it amounted to nearly 14 millions. The consumption of foreign paints, ochre and so forth, declined from 1.3 million dollars to \$680,000. In 1829 and 1830 the consumption was only about \$1000 a year.

The total value of manufactures retained for home consumption in the years 1821-1825 was \$167,209,000, in 1826-1830, \$171,030,000. Some attempt will be made to consider the price movement in these commodities as the different items are taken up in detail.

Industrial progress in the nineteenth century has, at each step, demanded increasing supplies of iron and its manufactures. At no time or place has this demand been more imperative than in the United States from 1820 to 1830. This was the critical period in the change from hand to machine industry in the North

and East. The effects of the increased consumption of iron and steel afford the best evidence of its increased use. In 1820, there were about 220,000 spindles in our cotton factories, in 1830 there were six times that number.<sup>1</sup> The improved quality, and the decreased prices, and the consequent increased use of agricultural implements largely made of iron and steel co-operated with the wonderful fertility of the lands of the lower Mississippi valley, to give our planters an unrivaled position in the field of cotton production before the close of the decade.<sup>2</sup> The introduction of steam driven machinery in the sugar industry of Louisiana in 1822 was probably the most effective factor in increasing the product of that state from 30,000 hogsheads to three times that amount before 1830.<sup>3</sup> Without the rapid development of steam navigation, the remarkable expansion in the area opened up for agriculture in the Northwest would have been impossible.<sup>4</sup>

The intensity of this demand in the West at the beginning of the decade, is indicated by the price of hammered bar iron which was sold for \$200 a ton in Pittsburg and Cincinnati.<sup>5</sup> The average price in foreign ports, of the bar iron imported into the United States during 1821, was less than \$55 a ton. The hammered bar iron imported that year probably cost about \$57 a ton.<sup>6</sup> After adding the import duty of \$15 a ton to this cost, there still remained nearly two thirds of the western price for freights, and profits to the importer. Such figures as these explain, in part, why the people of the West wished to encourage the domestic production of the commodities they consumed and why they were such positive protectionists during this period.

At the beginning of the decade we depended on importation for much more than half of our supplies of iron and steel and

<sup>1</sup> *Woodbury's Report, Executive Document, XXIV Congress, first session, No. 64.*

<sup>2</sup> *Reports of Committees, Convention of Friends of Industry, 1831, pp. 18 and 19.*

<sup>3</sup> BISHOP, *History of Manufactures*, vol. ii. p. 275; *Reports of Committees, Convention of Friends of Industry, 1831, p. 66.*

<sup>4</sup> BISHOP, vol. ii. p. 341.

<sup>5</sup> *Reports of Committees, p. 18.*

<sup>6</sup> *Reports of Committees, p. 17.*



their manufactures. The domestic production of pig iron in 1820 was only 20,000 tons.<sup>1</sup> The importation of unmanufactured iron and steel in the fiscal year 1821, was 22,925 tons. This exceeded in value, by less than 10 per cent., the imports of manufactures of iron and steel that year. The domestic product and the importations just compared are both abnormally small, but, as near as can be ascertained, both are taken at the extreme limit of their depression.

The conditions here reviewed would lead one to expect an increased importation of iron and steel, and such an increase occurred. In the first half of the decade imports of iron and its manufactures amounted to \$22,214,000, in the second to \$28,643,000, an increase of over 30 per cent. The value of the iron and steel increased 36 per cent.; that of their manufactures only 26 per cent. Nevertheless, the manufactures still constituted 56 per cent. of the 29 million dollars worth imported. The quantity of these goods paying specific duties increased a fraction less than 24 per cent. Their value increased nearly 26½ per cent.\*

Whether the imports under the ad valorem list advanced in price to a like degree cannot be ascertained. They were made up almost altogether of manufactures, and the decreased relative importation of the latter might be taken to indicate that they had advanced even more in price than the raw materials. This, however, would not be a safe assumption, since the same result might follow from keener American competition at a lower range of prices. The most complete list of prices for materials and manufactures in the same place is that given for Pittsburg on page 18 of the Reports of Committees to the New York Convention of 1831. This gives in general the same variation in both, with an occasional greater reduction in the manufactured article than in bar iron. Everything considered, we may say that the increase in the importation of iron and its

<sup>1</sup> SWANK, *Iron in all Ages*, 2d ed., p. 377.

\* This contrast is stronger if the opening and closing trienniums are compared. In these, quantities increased 33½ per cent., value 36½ per cent.

manufactures was probably a little less than 30 per cent., or at about twice the rate of the increase in population.

This rapid increase in the consumption of foreign iron would seem to warrant the opinion that the struggle for industrial independence, so far as that commodity was concerned, had been a failure, and that here at least the tariff legislation had not accomplished the desired end. A different view is obtained when we compare the increase in imports with the increase in domestic production.

Data as to the growth of the iron industry in the United States during this decade are exceedingly fragmentary. It appears that no estimate of the production has been made for any year of the first half of the decade. The estimate of a reputable authority as to the production of 1820 is 20,000 tons.<sup>1</sup> In 1822 the iron manufacture was still much prostrated.<sup>2</sup> These conditions were completely changed before the end of the decade. Swank gives the production in 1830 at 165,000 tons. The committee on iron of the New York convention of 1831, estimated it at 191,536 tons. Their estimate for 1828, based, however, on less complete returns, was 130,181 tons.<sup>3</sup> These figures indicate that the increase in domestic production from 1828 to 1830 nearly equaled in quantity the entire importation in 1821, and amounted to over one half that in 1830. In 1821 the domestic production provided about one third the supply consumed. In 1828 considerably over one half of our supplies came from our own furnaces. In 1830 they supplied about 75 per cent. of all iron consumed in the United States.<sup>4</sup> Our production of iron in 1830 was eight times that in 1820. During the same years the production of England had not doubled.<sup>5</sup>

These facts indicate the most gratifying progress toward economic independence in the iron industry. Viewed in light of the larger share of our supplies of iron that was produced at home,

<sup>1</sup> SWANK, p. 377.    <sup>2</sup> BISHOP, vol. ii. p. 275.    <sup>3</sup> *Reports of Committees*, p. 16.

<sup>4</sup> These estimates are necessarily very crude, but certainly approximate correctness closely enough for the general application here made of them.

<sup>5</sup> SWANK, p. 520. England's production in 1820 is placed at 400,000 tons, in 1830, at 677,417 tons.

and the remarkable gain in relative production in comparison with England, the large increase in imports ceases to be of significance as an index of our dependence on the foreign supply. It should, however, when considered in connection with the large increase in domestic production, be regarded as a striking indication of remarkable industrial activity in those branches in which larger operations involve an increasing consumption of iron.

The reduction in prices is no less striking than the increase in production. The figures given on page 477 show that in 1821, \$128 were required to pay for the services of the men who brought hammered bar iron from Europe to Pittsburg.<sup>1</sup> In 1830 these men, instead of \$128, received \$20.70 for the same service. The iron cost \$100 a ton in Pittsburg. Its price in Europe was \$57.30, a fractional increase over the price of 1820. The duty paid to the government had been increased from \$15 to \$22.40. If Europe had furnished the same proportion of our consumption in 1830 that she did in 1820 her shipments to this country must have been nearly three times as great. There can be little question that such an increase in demand would have resulted in a marked advance in the European price. The remarkable development of the interior of the United States during this decade would have been much retarded had it not been for the even more remarkable development of the domestic iron industry which accompanied it.

According to the report of the committee on iron of the New York convention, two thirds of the iron consumers of this country, because of their location, shared the benefits of the decreased price of iron, equally with Pittsburg. But the benefits that arose from the competition between domestic and foreign iron do not appear to have been confined to the interior of the country. There are no means of telling what were the charges to the people of New York City on the importation of English bar iron in 1820, but it is to be inferred from the charges on hammered bar iron in the case of Pittsburg that the importer must have

<sup>1</sup> *Reports of Committees*, p. 17.

received a liberal reward for his services. There are data for 1830 that enable us to ascertain definitely what he was receiving in that year. The average cost of the rolled bar iron in England was \$35.70 a ton. Each ton of this iron paid an import duty of \$37. According to Gallatin, the average price received by the importer, during that year, in New York City, was only \$74.50.<sup>1</sup> That is, after paying the English producer \$35.70 and the duty of \$37, the importer had \$1.80 a ton left from which to pay charges of transportation and provide profits on his own business. This very small reward to the partners of the English manufacturer in supplying the American market with rolled bar iron is quite conclusive evidence that the competition from iron produced in the United States had been an effective factor in the reduction of the import price over \$11 a ton between 1828 and 1830.

The consumption of foreign woolen manufactures so far as specified in the government reports amounted to \$45,360,000 in the first half of the decade and to \$36,941,000 in the second. The excess in the first half was the result of the extraordinary importation in 1822 and 1825. Those for 1822 were 70 per cent. in excess of those for 1821. Figures given on pages 252 and 253 of the second volume of Bischoff's work, *Woolen and Worsted Manufactures* indicate that the prices of woollens exported from England in the calendar year 1822 were nearly 30 per cent. lower than in 1820.<sup>2</sup> In addition to this decline in the price asked for her own product, England induced purchases from us by importing enough more cotton in 1822 than in 1821, and at enough higher price, to pay for this entire increase in our import of woollens. The first chapter of Bischoff's second volume makes it very clear that in 1821 the English manufacturers were anxious in regard to their market in the United States, and it would seem altogether probable that they offered American customers special inducements the next year. Bischoff's figures show that the prices of woollens advanced again during the middle of the

<sup>1</sup> *Senate Document*, XXII Congress, first session, No. 55, p. 55.

<sup>2</sup> The figures given by Bischoff are very crude material upon which to base a calculation of price, but are certainly sufficient to convince one of a very considerable decline.

decade and were higher in 1825 than they had been at its beginning. But when we consider that the increase in the price of cotton caused England's importations to be worth some 14 million dollars more in 1825 than they would have been at the price of 1823 it becomes quite evident that the real cost of woolens and probably all other imports was less to the American consumer in 1825 than in any other year of the decade.

Woolens were very much cheaper in the second half of the decade. Bischoff, speaking of two four-year periods ending in 1824 and 1828, says of the declared value of exports: "the price of wool having fallen 50 per cent., the declared value has fallen in the same proportion." It is not quite clear what he means, but the evidence of his whole book, enforced by Tooke's table of prices, establishes a very considerable decline. It may be stated as a strong probability that the smaller amount expended on foreign woolens in the second half of the decade provided for an undiminished consumption per capita.

The data bearing on the domestic woollen industry are quite as unsatisfactory as those concerning the manufacture of iron. It is known that under the abnormal stimulus of the War of 1812 the industry was rapidly developed. In 1815 the output of the factories was estimated at 19 million dollars worth annually.<sup>1</sup> The investment of capital was placed at 12 million dollars. One should remember that at the prices of 1815, 19 million dollars represented a much smaller output of cloth than the same amount of money would later.\* The protection afforded by the act of 1816 was by no means so adequate as that given by the war and all witnesses join in giving testimony to the decline of the industry up to about 1820. With the more favorable conditions for manufacture described in the preceding chapter,<sup>3</sup> investments again increased and continued to do so in spite of the effort of the English manufacturers in 1822 to take possession of the American market. In 1824, the government granted a higher measure of protection both to wool and woolens. The increase

<sup>1</sup> BISHOP, vol. ii. p. 214.

\* *Ibid.*, p. 208.

<sup>3</sup> JOURNAL OF POLITICAL ECONOMY, vol. viii. p. 48.

of the duty on wool counterbalanced to some extent the effect of the increase on woolens so far as the factories were concerned. But since nearly half of the wool was manufactured in the household and also because many of the factory owners were themselves engaged in sheep farming, it was not really of large importance to the industry as a whole, how the tariff might be divided between the material and the manufacture.<sup>1</sup> Testimony taken by the Committee on Manufactures in 1828 goes to show that the investment of more capital in the industry followed the passage of this act but that the increased duties afforded no considerable protection from the influx of foreign woolen goods which, the manufacturers claimed, reduced prices from 33  $\frac{1}{3}$  to 40 per cent. in the three years 1824-1827.<sup>2</sup> It is worthy of remark that, though the manufacturers charged this great decline in prices to heavy imports, they, nevertheless, admitted that on goods of exclusively domestic manufacture such as casinets and negro cloths prices had fallen as fast or faster.<sup>3</sup>

In spite of the lack of any exact data, some assertions may be made in regard to the woolen industry of this decade with considerable assurance. Its success, as at all other periods, was ardently desired by people in general, on the grounds of independence of foreign supply in time of war. It was handicapped, as in all other periods, by the high cost of its materials in this country. It attracted no considerable investment of capital except under the stimulus of some abnormal inducement, such as had been offered during the War of 1812 by the closing of ports because of hostilities. In this decade such inducement came first through the loss of credit abroad and the diminished profits of commerce and agriculture at home, and resulted in large investments from 1819 to 1823. This was followed by an appeal for higher protection, the passage of the tariff act of 1824, and another flood of investments soon halted under the sharp decline in prices resulting, in part at least, from increased imports.

<sup>1</sup> *American State Papers, Finance*, vol. v. p. 781 ff.

<sup>2</sup> *Ibid.*, p. 826.

<sup>3</sup> *Ibid.*, p. 830.

Accompanying the considerable investments in capital resulting from these more or less artificial incentives, there are found two facts of considerable importance. The first of these was a large increase in the production of wool at lower price. But even with the tariff protection that had been granted the sheep farmers, there was little grounds for expecting them to supply the home market with either the very fine or very coarse wools. The second was the very great improvements in processes of manufacture which it was freely claimed put the United States on a level with England if the raw materials could be furnished at the same prices.<sup>1</sup> This claim rested on the further claims of more skillful and willing work people, and better machinery.<sup>2</sup>

In the light of the facts that have been reviewed, the claim made in 1831 that the factories were making 24 million dollars worth of cloth annually does not seem more than mildly exaggerated. But even if it were considerably exaggerated, it would yet remain true that while the per capita consumption of foreign woollens measured in yards had not decreased during the decade, the consumption of those produced at home had increased with quite remarkable rapidity.

The total value of foreign cotton goods retained for home consumption in the first half of the decade was \$36,933,000, in

<sup>1</sup> Mr. Taussig quotes the following interesting testimony given to the Committee on Manufactures in 1828 and printed in the *American State Papers, Finance*, vol. v.: "Broadcloths are now made at much less expense of labor and capital than in 1825 by the introduction of a variety of improved and labor-saving machinery, amongst which may be named the dressing-machine and the broad power-loom of American invention" (p. 824). "Since the power-looms have been put in operation the weaving costs ten cents per yard, instead of from eighteen to twenty-eight cents" (p. 814). "The difference in the price of cloths (in the United States and in England) would be the difference in the price of wool, as, in my opinion, we can manufacture as cheap as they can" (p. 816). "The woollen manufacture is not yet fully established in this country, but I know no reason why we cannot manufacture as well and as cheap as they can in England, except the difference in the price of labor, for which, in my opinion, we are fully compensated by other advantages. We get those capable and willing to perform a much greater amount of labor in a given time. The American manufacturer uses a much larger amount of labor-saving machinery than the English" (p. 829).

<sup>2</sup> BISHOP, vol. ii. chap. 4.

the second half \$34,102,000. These figures indicate with tolerable accuracy the relative quantities of cottons, measured in yards, that were imported in the two periods. The declared value of the cottons exported from England to the United States during the years 1826-1830 was only 1.6 per cent. less per yard than it had been in the years 1823-1825. It is evident that the increase in quality of the cottons demanded in the American market had been nearly as rapid as the general decline in the value of cottons. It is worth while to note that the consumption of foreign cottons in the first half of the decade would probably not have exceeded that in the last had it not been for the extraordinary importations of cotton goods in 1825. This importation, stimulated by the equally extraordinary demand for our raw cotton in England, exceeded the average value imported during the preceding four years by about five and one half million dollars.

The decrease in the consumption of foreign cottons, as indicated by the values, imported during the two halves of the decade was about 8 per cent. The increase in the domestic production consumed at home was over 50 per cent. It seems probable that had the demand for cottons increased as rapidly as that for iron, and had the tariff been as high on the more expensive cottons as on iron, the increase in our manufactures of cotton would have equaled that in iron. The factors that were responsible for the great increase that did take place may be enumerated as follows: cheaper inland transportation; lower prices of cotton in America, which increased the disadvantage of the European manufacturer, due to ocean freights; improved and less expensive machinery; the development of water powers in different localities; cheap labor, which was a possibility without hardship to the laborers on account of the extremely low cost of living in the United States at that time, and the protective tariff.

The consumption of foreign manufactures of flax declined in value from \$12,759,000 in the first half to \$10,046,000 in the second. In 1822 it amounted to \$3,730,000. The consumption in that year was over 50 per cent. larger than in any other year



of the decade. It equaled in value 56 per cent. of the foreign cottons consumed in the same year. The year 1828 was second in the value of foreign flax manufacturers consumed by us. The value was a little less than two thirds of that consumed in 1822 and was but 28 per cent. of the value of cottons consumed in the same year. The consumption was relatively smaller in 1825 than in any other year, being but 20 per cent. of that of cotton. Our import statistics do not give the quantity of these goods imported. There are reasons, however, for supposing that there was a considerable decline in their price. According to Tooke's tables of prices the value of raw flax declined over 25 per cent. The weaving of flax was still done by hand, but the cost had in all probability been considerably reduced by the competition of hand weavers, driven out of the woollen and cotton industries. It is not reasonable to suppose that the resulting reduction in the price of linens could have been greater than the decrease in the value imported in the second half of the decade as compared with that imported in the first. It is safe to say that our consumption of foreign manufactures of flax, measured per capita declined considerably during the decade.

The consumption of foreign silks declined from \$28,160,000 to \$27,940,000. Tooke's prices do not establish clearly any decline in the prices of raw silk imported from Asia. There was a considerable decline in the prices of European raw silks. This in part explains why total imports from Asia declined from \$14,974,000 to \$12,027,000 and total imports from France advanced from \$13,355,000 to \$21,284,000. The Chinese and East Indian silks were also put at a disadvantage by the increase of the differential duty from 10 per cent. to 20 per cent. by the tariff act of 1824.

The industry of printing, stamping, and staining foreign silks was growing very rapidly. These silks when re-exported were valued much higher than when imported. If the increase in the valuation of re-exports from this cause could be ascertained, it would probably show that the value of foreign silks retained in the United States was greater in the last half of the decade than

in the first. Tooke's prices show a decline in European raw silk about equal to that in cotton and the cost of manufacture must have shared in the general decrease of manufacturing costs. It follows that, unless American wearers of silk were demanding a higher grade of goods as they did in foreign cottons, they consumed more yards of silk per capita at the end than at the beginning of the decade.

This detailed study of our exports and imports will be of little value unless it assists us to correlate more clearly and more correctly the forces and conditions, that were most effective in the economic progress of the United States from 1820 to 1830. The low and decreasing comparative cost of cotton must be taken as the most important phenomenon in any such correlation. Phenomena of hardly less importance, however, are found in the decreased comparative cost of manufactures throughout the country, and the increased relative value of agricultural products in the interior of the country.

It will not be necessary to repeat here the résumé of causes contributing to the decreased cost of producing cotton, already given. The unique adaptation of the soil and climate of the Gulf states may be referred to once more, as an altogether essential factor in the remarkable development of that section during this decade. A condition, however, without which even this remarkable adaptability would have been in a great degree ineffective, was the extraordinary increase in the demand, both foreign and domestic, for our raw cotton. This increase was due to the great improvements that had been made and were still being made in the processes of preparing, spinning, and weaving cotton. Improvements in the machinery of the textile industry were especially effective in increasing the demand for cotton at this time, because, in nearly every case, the new inventions were applied in the cotton industry with much greater ease than in the manufactures of woolens. This handicap on the consumption of woolens was further increased in the United States by the heavy duty laid on both raw and manufactured wool. It would seem that the tariff on cottons would have

discouraged their consumption in a like degree. This was not the case, however. The great investments of capital induced by the protection given it through the minimum provision of the act of 1816, had been followed by an activity in invention, a development of transportation facilities, and an application of water power to manufactures, that certainly argued very effectively for the influence of legislative provisions upon the industries of a country. The result of these combined improvements and the competition following upon large investments of capital, was such a reduction in the price of American cottons, that by the middle of the decade, the tariff on low-priced cottons was no longer any considerable tax on the consumer and the exportation of cotton manufactures was rapidly increasing. The demand for raw cotton from the manufacturers both in France and the United States was increased by their protective tariffs. The effectiveness of their combined demand in keeping up the price of raw cotton in 1825 has already been noticed. Mechanical difficulties in the manufacture of woollens, effective taxes on the consumption of woollens, and effective government encouragement of the manufacture of cottons were thus co-operating to increase the demand for raw cotton. This demand, moreover, was constantly growing because of the steady improvement in the texture, coloring, and designs of the fabrics themselves.

But, turning to the supply side of the question again, though the primary importance of the conditions of soil and climate are at once conceded, the devious interrelation of economic forces is well illustrated by the influence of some other, less important and yet significant, factors. Probably the most important of these was the sufficient supply of negro labor at an actually decreased cost of production and up to the end of this decade but slightly increased capitalized value.<sup>1</sup> Just at the time when the South became so engaged in producing cotton that it could no longer give the time of the slaves to the production of their own food and clothing, the river steamboat and machine weaving

<sup>1</sup> The market value was about two thirds as much in 1830 as in 1805. *Niles*, vol. xxxix. p. 238.

made it possible for the North to step in and take up that part of the work at half the expense that would have attended such operations in an earlier period. But if the reduced cost of maintaining the slave was of importance to the cotton planter, he was also fortunate in the decreased relative demand for the services of the slaves on the tobacco plantation, and in the fact that supplies of sugar from other sources having greater natural advantages, prevented any large increase in the demand for slave labor on the sugar plantations, even though that industry was allowed tariff protection sufficient to pay over half the cost of production. If these two industries had been equal competitors with cotton for slave labor would the United States have attained that easy supremacy as the world's producer of raw cotton which was conceded to her in 1830? It is not probable that the suggested condition of the labor market would have given first place to any of her competitors. Her advantages in soil and climate are conceded, and when the superior application of implements and machinery is added to these, one feels that the peculiar circumstances as to the supply of slave labor though of great importance, were not a decisive factor in the case. But the supply of commodities, implements and machinery from other sections of the country at prices that made their increased use profitable, brings us to the consideration of the decreased cost of manufactures.

The amount of this decrease has been indicated in the data presented in the study of the important imports. That this reduction included the cruder manufactures and other foreign products is illustrated by a comparison of certain prices in Cincinnati for the years 1819 and 1833. The price of mackerel fell from \$40 to \$8½; of Currier's oil from \$60 to \$18; of rosin from \$16 to \$2½; of coffee from 33 cents to 14 cents; of New Orleans sugar from 17 cents to 7½ cents.<sup>1</sup>

The most important factor in this decrease, the increased use of machinery, was operating throughout the civilized world. But there were other causes of considerable importance in large

<sup>1</sup> *Niles*, vol. xliv. p. 36.

degree confined to the United States. One of the most important of these was the shifting of investments from commerce to manufactures. The great increase in the amount of investments in manufactures has already been sufficiently considered. How far such increase was the result of decreased interest in foreign commerce is indicated by the reduced tonnage of our merchant marine engaged in foreign trade, which measured 593,825 tons in 1820 and but 537,563 in 1830.<sup>1</sup> Our patent laws must also be credited with a part of the great number of new mechanical appliances introduced during the decade. The inventions themselves were, in their turn, now cause and now the effect of the increased investment of capital in manufactures.

In the United States, moreover, the reduced cost of transportation equaled in effectiveness the increased use of machinery in bringing about this reduction in prices. Here capital and invention played much the same rôles as in the direct processes of manufacturing but direct assistance from both national and state governments was a much more important factor in increasing the facilities of transportation than tariff legislation in developing particular industries. The greatest and most successful of any of the state enterprises was the Erie canal. Many of the states followed the example of New York with varying degrees of success. As a result, the canals which in 1820 formed an inconsiderable part of our transportation system, in 1830 measured about 1300 miles, while it was reported that nearly 2000 miles more were in process of construction.<sup>2</sup> The reduction in freights brought about by the increased use of the canal was estimated at 66 per cent. before the end of this decade.<sup>3</sup> Prices of flour in eastern and western markets give good support to the estimate.<sup>4</sup>

The development of the country's own resources in raw materials, the large increase in the use of water power, and the decreased cost of raw materials that were necessarily imported were all noteworthy, though minor factors in the decline in the

<sup>1</sup> *Report of the Commissioner of Navigation, 1895*, p. 334.

<sup>2</sup> *Niles*, vol. xxxviii. p. 433.

<sup>3</sup> *Niles*, vol. xl. p. 281.

<sup>4</sup> *Ibid.*, p. 63.

price of nearly all commodities that the American farmer bought.

Barring the introduction of any new factors, the increase in the relative value of agricultural products on the farm is a necessary consequence of the forces and conditions that have already been considered. A factor that would in time operate in the opposite direction, was the rapid immigration into the Mississippi valley of a population that must devote itself largely to agriculture. Moreover, it is also true that the use of newly invented machinery and the opening up of more fertile lands was reducing the actual sacrifice cost of producing agricultural commodities nearly, if not quite, as fast as that of manufactures; and in the case of the great agricultural product of the South much faster. But of course it is at once recognized that cotton is an exception to the general rule in the case we are now discussing.

In spite of the two opposing forces just noticed, the reality of the increased relative value of farm products in the interior of the country cannot be questioned. Cincinnati prices indicating the extent of the decline of prices of other commodities have already been given. Prices for the same years, 1819 and 1833, in the same market show that farm products had advanced phenomenally. Flour, from \$1 $\frac{3}{8}$  to \$4 $\frac{1}{4}$  a barrel; corn, from 10 to 30 cents a bushel; pork from 1 $\frac{1}{2}$  to 3 cents a pound; whiskey (at that time a country product), from 14 to 30 cents.<sup>1</sup> Even in New England, according to the carefully prepared tables of retail prices given by Carroll D. Wright in the Massachusetts Statistics of Labor, 1885, the agricultural conditions had gained in relative advantages, upon those of manufacturing, from the first to the second half of the decade.

Since this gain in values of farm products was made in spite of more favorable conditions of production and a constantly growing supply, its explanation must necessarily be found on the demand side of the equation. The changes there are quite

<sup>1</sup> *Niles*, vol. xliv, p. 36.

in evidence. Bear meat no longer formed a considerable item in the winter store of provisions. The "new comer" steadily increased his demand upon older settlers. New non-agricultural communities were already established on the western margin of migration.<sup>1</sup> But, beyond question, the most important increase in the demand arose from industrial and economic changes in the South and East and improvements in transportation facilities, the combined effect of which made it possible even so soon to look upon the Mississippi valley as the grain field and pasture land of the whole country. Moreover the building up of the new transportation systems contributed very considerably to the demand for farm products along the lines of construction. The extent of the movement of western products to the East is indicated by the fact that in 1830 Rochester, New York, alone imported 200,000 bushels of wheat from Ohio, and, according to the *Rochester Daily Advertiser*, was sending money into that state for the purchase of produce at the rate of \$75,000 a month. In addition to the increase in domestic demand, changes in the laws of England had created a demand for western wheat to be exported by way of the St. Lawrence River and Canada. This demand, together with the construction of the Ohio canal, had caused the price of wheat far in the interior of the state to be much higher than it had been ten years earlier on the Ohio River, the only outlet to distant markets.

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<sup>1</sup> See notice of western lead mines, p. 474.

## APPENDIX

## TABLES RELATING TO THE FOREIGN TRADE OF THE UNITED STATES

I. IMPORTS, EXPORTS, AND CONSUMPTION OF FOREIGN FOODS, 1821-1830  
(In thousands)

	Wine						Spirits						Meat						Tobacco					
	Guano			Value			Guano			Value			Guano			Value			Pounds			Value		
	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption
1821.....	3,215	327	2,888	1,873	241	1,632	3,658	255	3,403	1,805	165	1,640	9,087	37	9,050	1,710	11	1,708	4,976	390	4,586	1,323	242	1,081
1822.....	2,675	684	1,991	1,902	380	1,612	5,096	323	4,746	1,791	237	2,273	12,000	13	11,987	2,398	4	2,394	6,639	1,334	5,305	1,261	700	1,161
1823.....	2,101	791	1,310	1,051	328	773	3,496	432	3,514	1,791	237	1,554	13,019	3	13,016	2,458	1	2,453	8,310	1,735	6,575	2,361	814	1,547
1824.....	3,161	797	2,364	1,856	449	1,377	4,578	450	4,128	2,274	306	4,038	13,118	16	13,099	2,414	5	2,409	10,314	1,149	9,165	2,786	562	2,247
1825.....	14,220	4,935	11,285	7,907	1,595	6,312	22,362	1,988	20,374	12,455	1,121	11,334	59,759	88	59,671	11,712	26	11,686	38,966	7,444	31,522	12,660	3,800	8,260
1826.....	3,376	610	2,766	1,981	366	1,415	3,718	510	3,208	1,688	297	1,401	13,843	51	13,792	2,830	16	2,823	10,009	2,805	7,204	3,752	2,443	7,943
1827.....	3,278	591	2,687	1,761	325	1,356	5,137	354	3,183	1,651	281	1,427	13,577	20	13,557	2,819	6	2,813	7,297	1,666	5,631	1,715	772	943
1828.....	2,915	507	2,408	1,508	328	1,180	5,103	360	4,735	2,255	207	1,373	13,394	30	13,364	2,888	9	2,779	6,637	1,418	5,219	680	1,271	1,531
1829.....	3,076	356	2,721	1,570	186	1,384	4,424	735	3,689	1,448	490	958	10,150	37	10,123	1,484	8	1,476	6,607	1,034	5,573	2,060	591	1,532
1830.....	3,281	388	2,893	1,535	204	1,331	4,602	706	3,896	659	406	253	8,374	27	8,347	996	7	989	8,609	1,746	6,863	2,425	863	1,532
Decade.....	16,078	2,452	13,626	8,015	1,426	6,589	16,474	2,665	13,809	7,678	1,672	6,006	59,136	165	58,973	10,946	46	10,880	38,928	8,609	30,399	12,403	4,183	8,220
	30,208	5,387	24,911	15,022	3,021	12,901	38,936	4,653	34,183	20,133	2,793	17,340	118,897	253	118,644	22,638	72	22,566	77,897	16,273	61,624	24,463	7,983	16,486
	Coffee						Sugar						Fruit						Spices					
	Pounds			Value			Pounds			Value			Pounds			Value			Pounds			Value		
	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption
1821.....	21,274	9,388	11,886	4,490	4,087	4,403	59,516	20,062	39,454	3,554	1,549	2,005	2,879	176	2,703	181	15	166	2,636	1,000	1,636	310	236	74
1822.....	25,782	7,267	18,515	5,553	1,654	3,899	66,791	21,459	45,332	5,035	1,959	3,976	6,000	245	5,755	365	25	140	4,486	3,039	1,447	505	455	50
1823.....	37,338	20,901	16,437	7,098	4,263	2,835	60,791	21,459	39,332	3,259	1,479	1,780	6,079	1,184	4,895	401	74	327	4,581	5,397	816	581	—	
1824.....	39,244	19,427	19,817	5,437	2,923	2,514	94,458	14,128	80,334	5,412	999	4,413	5,687	460	5,227	348	37	371	5,441	3,130	2,311	655	600	55
1825.....	45,194	24,513	20,681	5,251	3,255	1,996	71,712	11,837	59,875	4,233	1,615	2,618	6,027	540	5,487	358	56	302	4,053	3,450	603	626	705	79
1826.....	168,832	81,496	87,336	27,839	14,182	13,647	374,782	91,933	282,849	21,493	6,701	14,792	26,672	2,605	24,067	1,613	297	1,406	21,197	16,016	5,181	2,677	2,891	144
1827.....	37,310	11,584	25,725	4,160	1,449	2,711	84,095	41,337	42,758	5,312	1,742	3,570	5,220	270	4,950	375	30	345	6,614	3,085	3,529	595	579	16
1828.....	50,052	21,608	28,334	4,464	2,325	2,130	76,702	15,344	61,358	4,577	1,191	3,386	7,736	713	7,023	434	55	379	2,892	2,040	852	323	303	40
1829.....	55,195	16,038	39,157	5,792	1,497	4,295	60,791	21,459	39,332	3,259	1,479	1,780	6,079	1,184	4,895	401	74	327	4,581	5,397	816	581	353	352
1830.....	51,488	13,125	38,363	4,227	1,047	3,180	86,490	9,726	76,764	4,631	884	3,947	6,837	753	9,084	520	93	427	4,735	1,524	3,211	662	462	462
Decade.....	245,188	80,539	164,649	33,332	7,855	15,377	368,333	52,241	316,092	21,690	5,860	16,430	61,776	3,514	32,458	2,029	253	1,776	24,092	11,607	12,485	2,271	1,655	616
	414,020	162,025	251,995	51,061	22,037	20,024	743,115	144,174	598,941	43,183	11,961	31,222	117,766	5,251	56,525	3,642	460	3,182	45,386	17,623	27,666	4,048	4,476	472

\*If the statistics on sugar are corrected by including exports of refined sugar the quantities consumed by quinquenniums will be 282.4 and 313.4 million pounds. The values 14.7 and 16.1 million dollars. The quantities by decades will be 595.8 and 946 million pounds; the values 30.8 and 59 million dollars.





II. IMPORTS, EXPORTS, AND CONSUMPTION OF FOREIGN MANUFACTURES, 1821-1830.  
(in thousands of dollars)

	1821-25			1826-30			Decade 1821-30		
	Imports	Re-exports	Domestic Consumption	Imports	Exports	Domestic Consumption	Imports	Exports	Domestic Consumption
Woolen piece goods.....	31,459	1,610	29,849	23,738	921	22,817	55,197	2,531	52,666
Worsted stuff goods.....	9,976	444	9,532	6,971	158	6,813	16,947	602	16,345
Other woollens.....	6,259	280	5,979	7,539	228	7,311	13,798	508	13,290
Colored cottons.....	28,608	4,809	23,799	25,209	5,146	20,123	53,877	9,955	43,922
White cottons.....	13,781	2,495	11,286	12,027	2,361	9,666	25,808	4,856	20,952
Other cottons.....	5,361	3,513	1,848	7,509	3,277	4,313	12,951	6,790	6,161
Linens.....	18,462	5,503	12,759	14,736	4,690	10,046	32,998	10,193	22,805
Silks.....	36,280	8,017	28,263	36,066	7,017	29,049	72,346	15,034	57,312
Laces.....	1,001	136	865	4,017	448	3,569	5,018	584	4,434
Cotton bagging.....	655	3	652	1,394	20	1,374	2,049	23	2,026
Duck and other hemp.....	8,356	2,798	5,558	8,696	2,899	5,797	17,052	5,697	11,355
Glass and other wares.....	7,019	558	6,461	9,430	755	8,675	16,449	1,313	15,136
Glass.....	623	35	588	899	139	760	1,522	174	1,348
Bar iron — rolled.....	8,203	355	7,848	1,357	95	1,262	18,230	609	17,621
Bar iron other than rolled.....				8,670	159	8,511			
Steel.....	1,073	76	997	1,707	158	1,549	2,780	234	2,546
Other iron, specific.....	1,808	191	1,617	2,271	358	1,913	4,079	549	3,530
Other iron, ad valorem.....	12,785	1,033	11,752	16,389	981	15,408	29,174	2,014	27,160
All other manufactures.....	8,402	846	7,556	14,585	2,511	12,074	22,987	3,357	19,630
Total.....	199,911	32,702	167,209	203,351	32,321	171,030	403,252	65,023	338,239
Woolens.....	47,694	2,334	45,360	38,248	1,307	36,941	85,942	3,641	82,301
Cottons.....	47,750	10,817	36,933	44,886	10,784	34,102	92,636	21,601	71,035
Iron and steel.....	23,869	1,655	22,214	30,394	1,751	28,643	54,263	3,406	50,857



## THE MODERN CONDITION OF AGRICULTURAL LABOR IN BOHEMIA.

*Historical survey.*—In order to understand the present situation of agricultural labor in Bohemia, some slight review of the history of the country is necessary. In the first place, it is to be remembered that the population is not homogeneous. On the one hand, we have the German element, dominant in the politics of the empire, leader in the financial and industrial world. On the other hand, the Czech, of different racial stock, a majority as to numbers, ardent patriots as a class, regarding the German party as a usurper, but seemingly unable to oust it from its position either of political or of industrial supremacy. The latter element furnishes the bulk of the agricultural population. Although both races are represented in varying proportions in all the large cities of the kingdom and both are to be found in greater or less numbers throughout most of the districts, yet from early times there seems to have been a somewhat sharp geographical line of division between them. This line follows pretty closely certain physical aspects of the country.

The kingdom of Bohemia as a whole is basin-shaped. The hilly and mountainous districts in the north and west contain extensive coal beds and numerous iron deposits, offering facilities for manufacture similar to those of Lancashire, England. Even before the rise of the factory system, these districts, with the adjacent lower lands, were the chief seats of the woollen and linen weaving and spinning industries, and, later, of the cotton manufacture.

The quartz, feldspar, and earths suitable for manufacturing glass and porcelain, found in the south and west and to a less extent in the east, gave rise to the celebrated Bohemian glass industry of the Bohemian forest and the districts on the borders of Moravia. Thus in the early years of the present century,

there was, as today, a belt of extractive and manufacturing industries extending around three sides of the kingdom.<sup>1</sup>

These industries were and are largely in the hands of the German-Bohemians. The close proximity of German Saxony on the west and north and of Bavaria on the southwest, when taken in connection with the strong racial feeling that has made fusion between German and Slav impossible, doubtless has had its effect in holding the mass of Germans to a district where intercourse with what they have looked upon as the mother-country would be possible.\*

At the beginning of the century, the Germans were more advanced in the technique of industry than the Czechs, and better adapted by inheritance and training to the manufacturing industries.<sup>3</sup> They would, therefore, naturally prefer to remain in parts where the physical resources were favorable to manufactures and where easy river communications opened up trade with German markets, and through them with countries more remote. Although today large numbers of the operatives of the industrial centers are Czechs, initiative and control are still in the hands of the Germans.

The great fertile basin in the center of the kingdom has been the home chiefly of the Czechs. As a race, the Czechs have been largely agriculturists. While many of the large estates have been and are the property of nobles of German origin, the great mass of the peasant farmers and agricultural laborers are Slavs.

The feudal relations which existed between the owners of the large estates and the peasants continued down to the revolution of 1848. The legal reforms effected by Maria Theresa and her son, which had brought so much promise to the peasants, if not abrogated, had become dead letters during the

<sup>1</sup> *Tafeln zur Statistik der Oesterreichischen Monarchie*, 1841, Einleitung.

\* According to Palacky, Pelzel, and other Bohemian historians, this mountainous belt approximates closely to the district into which the people of Teutonic race had been pushed back during the first invasions of the Czechs and to which they have been confined ever since.

<sup>3</sup> Cf. ROSCHER, *System der Volkswirtschaft*, vol. i. p. 612.

half century following the accession to the throne of Leopold II (1790) In this half century the peasants probably reached the lowest depths of the poverty and misery which they had suffered since the beginning of the feudal period in Bohemia.

Violand<sup>2</sup> and other contemporary writers declare that, in arrogance, immorality, and excessive exactions, the lords of the manor were in no way behind their brethren of the France of the preceding half century. There were other burdens to be borne, but that which economically pressed most heavily upon the peasant was the personal service, or "robot,"<sup>3</sup> which he was required to render to the lord of the manor. By the decree of Joseph II, November 1, 1771, the amount of service to be demanded had been limited by law. According to this the "Ganz-und Halb-Lehners"<sup>4</sup> must give 104 days' service during the year, the former with four horses and the latter with two. From the "Viertel-Lehner" the service was limited to 104 days without horses; from the cottager with more than one Joch<sup>4</sup> of land, to 52 days; from the cottager without any or with not more than one Joch, to 26 days, and from the "Innman," to 12 days.<sup>5</sup> One day's work with a team might be redeemed by payment of 20 to 24 kr., one day's hand-work by 6 to 15 kr. c.m. The study of documentary evidence shows that the laws were not strictly enforced, and that the amount of service demanded varied greatly in different localities and even on different estates in the same locality, and depended upon the temper of the lord of the manor.<sup>6</sup>

A picture of the abuses under which the peasants suffered in the latter half of the eighteenth century, drawn from material

<sup>2</sup> *Die sociale Geschichte der Revolution in Oesterreich*. Leipzig, 1850, p. 27.

<sup>3</sup> Robot = frondienst. The former is a Slavie word usually employed in Bohemia to express this personal service.

<sup>4</sup> The "Ganz-Lehner" occupied an entire peasant holding; the "Halb-Lehner" held one half as much and the "Viertel-Lehner" one fourth as much land.

<sup>4</sup> One Joch = .575464 hectares = 1.4218 acres.

<sup>5</sup> VIOLAND, *Sociale Geschichte*, p. 31.

<sup>6</sup> Cf. A. JÄGERS, *Dorfchronik*, Reichenberg, 1865, p. 27 et seq.

gathered from official reports of that period,<sup>1</sup> is said, by those still living whose memories go back to pre-revolutionary times, to represent as accurately conditions during the first half of the present century. In addition to the legal number of days service, the demands upon the time of the peasant was so great that often his own fields had to go untilled. Or if in any year sufficient food could not be raised, the seed reserved for planting was consumed, and none could be obtained in the spring. The crops were frequently destroyed by the game which the peasants were not allowed to drive from the fields, or by the hunt passing over them. What had once been common pasture was appropriated by the lords, and great difficulty in keeping cattle resulted. The peasants were not allowed to gather the green stuff that grew in the forests, for fear they might steal wood or frighten the game. Thus they were sometimes driven to use the thatches of their roofs to feed the cattle, and so keep them alive during the winter. Sometimes, unable to meet the demand for personal service, the peasant was compelled to sell his cattle or to exchange a good animal for a poor one. It was unsafe to own good horses, as they were apt to be appropriated by the master. The peasants on this account preferred oxen. In one district the peasant farmers complain that in winter they must work, in person, with their teams, three days each week, and in summer every day, besides supplying one or two extra hand laborers, according to the size of the holding. There seems to have been absolutely no limit to the service demanded, except the necessity or the greed of the master.

In times of war, grain, cattle, and horses were taken from the peasants without payment, and redress from the war-courts was impossible. Not only were the adult men and women forced to

<sup>1</sup> In 1770, with the ostensible purpose of obtaining reliable data as a basis for recruiting the army, Maria Theresa requested the commissioners of the various districts, together with the military officers, to examine into the condition of the population of the empire, giving particular attention to the relations of the peasants to the manorial lords. So much of this report as deals with economic conditions in Bohemia is printed by F. Mayer under the title "Die volkswirtschaftlichen Zustände Böhmens um den Jahren 1770," in *Mittheilungen des Vereins für Geschichte der Deutschen in Böhmen*. Prag, 1862, etc., vol. xiv. 1876, p. 125 et seq.

labor without reward, but they were obliged to send their children to hard work in their tenderest years. Little ones of seven years and less were compelled to carry on their backs the firewood for the manor house from parts of the forest inaccessible to wagons. The children were weakly and stunted in their growth through the severe labor to which they were subjected.

The grievances of the peasants played an important part throughout the entire Austrian Empire in the causes leading up to the revolution of 1848. This was particularly the case in Bohemia, where the demand for the complete abolition of all feudal claims was the unifying force of the revolutionary party. It was almost solely through this demand that any headway was made among the peasantry in attracting them to the national cause. What they wanted was the abolition of the "robot." When this end was gained they ceased as a class to take any interest in revolutionary matters. The patent of the Emperor Franz Joseph, published March 4, 1849, provided for the complete freeing of the land from all obligations to the feudal lords.

The noblemen who owned the large estates were themselves not entirely averse to the new conditions. Forced labor rendered grudgingly is not economical. Such labor could not well be adapted to modern rational agricultural methods. The opening up of the country through railways and steamboats was more and more bringing the agricultural products of Bohemia into competition with those of the outside world. It was necessary that the farmers of Bohemia should adopt more advanced methods or fall out of the competition altogether. After the revolution all land owners were obliged to depend upon labor employed under a system of free contract. There was, however, no abrupt transition to a pure money economy. Compulsory labor had always been supplemented by paid labor, but labor paid for chiefly in farm products and wood, or by the privilege of using additional land for pasture or small crops. Such members of the families of the peasant farmers as were not needed upon the home farm were glad to engage themselves as before for a fixed price. Landless families in constant employment were settled upon the



estates of their masters, and the modern system of "deputatisten" developed.

Until this time, agricultural methods in Bohemia had been much behind those of other countries in western Europe. Now the proprietors of the large estates began to study agricultural chemistry, the rotation of crops, horticulture and improved methods of stock breeding. The farm implements in use had been of a most primitive type. Now more modern plows were introduced; and such machines as those for sowing, reaping, and threshing began to replace hand labor in the more progressive districts. The peasant farmer was naturally slow in adopting new methods. In the first place he was by nature averse to what he regarded as experimental. He believed that his father's methods were good enough for him. His mind was sluggish in its action, and he did not readily imitate the methods which he saw adopted on the large estates.\* Another obstacle was his almost total lack of capital. Even if better implements or improved processes of manuring and deep plowing commended themselves to him, he seldom had the means to introduce them.

Moreover the general spread of information regarding better agricultural methods was retarded by the aversion of the peasantry to the German language. All through the period of German domination, down to the Czechish renaissance in the first half of the present century, the German language, although that of the state, the school, and the upper classes, had never become that of the peasantry who clung tenaciously to the native tongue. Although the children were obliged to speak German in the schools until twelve years of age, in the Czechish districts they immediately dropped it when compulsion was removed.

There had been attempts toward better agricultural conditions even before the revolution. Some few agricultural papers printed in the Czechish language had been circulated, but, generally speaking, the articles were translations from the German, and

\* Deputat = an allowance; the word "deputatisten," for which there seems to be no exact English equivalent, is used to designate a class of farm laborers whose service is paid for chiefly by a stipulated amount of farm produce.

\* Cf. F. A. SCHMALFÜSS, *Die Deutschen in Böhmen*. Prag, 1851, p. 31.

related to a state of agriculture so far advanced that they were practically useless to the peasant farmer.<sup>1</sup>

The decade from 1849 to 1859 was a time of readjustment and slow change; but during the sixties the advance in agricultural methods became perceptible.

The peasant, since his freedom from feudal obligations, had begun to feel some of the ambitions of independence. He saw possibilities for himself and his children. He began to desire a better education for the latter and a better standard of living for himself. These new needs must be met by the income from his little farm. At the same time, there was a steady rise in the rate of taxation. Both of these circumstances acted as a stimulus to the adoption of better methods of farming, and gradually so far as was practicable, the peasant began to follow the methods adopted on the large estates.

*Peasant proprietorship.*—The desire of the peasantry to own or control land has always been, in civilized countries and under favorable circumstances, a powerful incentive to industry and thrift. Since the days of Arthur Young it has been recognized as a motive which plays an important part in determining the standard of living of the lower agricultural classes. Where the desire is exhibited in its strongest form the resulting habit of saving, as is said to have been the case in France, may go so far as to trench upon the necessities of life, and may reach a point where the bodily health and efficiency of the laborer himself is impaired.

It is obvious that this desire for the ownership of land can have been developed in force only in countries whose laws and customs have made its gratification possible, at least within limits. It was not until twenty years after the revolution of 1848 that the gradual acquisition of land became possible for the agricultural laborer of Bohemia.

In all Austria, down to 1868, peasant properties could not be subdivided.<sup>2</sup> At his death the peasant tenant could bequeath

<sup>1</sup>F. RIEGER, *Cechy Země i Národ* (Bohemia, the country and the nation). Prag, 1863, p. 545.

<sup>2</sup>KARL GRÜNBERG, "Studien zum Oesterreichischen Agrarpolitik," etc.; *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*. 20. Jahrgang, p. 82.

his property to one of his children. Custom, rather than law, determined which son should inherit and the custom seems not to have been uniform in the different provinces.<sup>1</sup> Often it was the youngest son who inherited. In case the peasant holder died intestate the children inherited equally. The result was that either the property had to be sold and the proceeds divided among the heirs, or the son taking over the land had to burden it with a claim for the share of each of his brothers and sisters. This often proved more than he could carry.<sup>2</sup>

In both these ways properties came into the market. But the fact that the properties must be sold as wholes made it impossible for the agricultural laborer to improve his condition gradually, by buying one field or one small patch of ground at a time.

By the law of December 20, 1869, peasant-properties in Bohemia became divisible. Much doubt was felt at the time as to the desirability of the law and much difference of opinion exists today as to its effects. The chief objection is that it is believed to lead on the one hand, to the absorption of much land into the large estates and, on the other, to the splitting up of the land into very small parcels, each of itself incapable of supporting a family. This gives rise to a class of partially independent farm laborers, who are on that account more difficult to deal with, at least from the point of view of the large farmer. A further result of this movement in opposite directions is the danger of the extinction of the better class of independent peasant proprietors.

The law of 1869 did not affect the large estates (*Grossgüter*), which cannot be subdivided and whose ownership carries with it important political rights. The statistics of Bohemia do not give the exact number of these, but they are between three and four hundred. They pay a minimum annual tax of 500 gl. each.<sup>3</sup>

In the report of 1895 concerning agricultural wages (p. 5) it is stated that about 34.5 per cent. of all the land in Bohemia

<sup>1</sup> MAYER, Report of 1771.

<sup>2</sup> KARL GRÜNBERG, *ibid.*, p. 82.

<sup>3</sup> Personal statement of the owner of one of the large estates.

belongs to these large estates. In the "Statistical Tables in regard to the Changes in the Subdivision of Landed Property in the Kingdom of Bohemia,"<sup>1</sup> it gives for the year 1889-90 27.45 per cent. of the total area as "Gebundener Besitz" and "Besitz in todter Hand," while 72.55 per cent. is freehold property. Of this freehold property there is 14.19 per cent. included in the highest division, or properties over 200 Joch in extent. It seems safe to assume, however, that at least 30 per cent. of the land in Bohemia today is held in parcels which cannot be subdivided.

If the figures for 1889-90 are compared with those for the period 1861-1872 it will be seen that the indivisible portion of the land has increased only a little over 1 per cent. in eighteen years. This does not seem to indicate a very general tendency toward absorption of the peasants' land on the part of the large estates. Table I gives the summaries for the two periods investigated.\*

We see from this that while the number of properties of over 200 Joch has doubled, the area of the individual properties has diminished by more than one half, while at the same time the percentage of such properties to the total area of the kingdom has increased only a little more than 3 per cent. The number of properties in the class between twenty-five and fifty Joch shows the greatest falling off in point of numbers, and the class of from one to five Joch the greatest increase both in number of properties and in the percentage gain in the total area. The tables undoubtedly show the double movement in the direction of larger and of smaller properties. Still, the properties ranging from ten to fifty Joch form 34.9 per cent. of all the land in Bohemia, or as much as is included in the large estates. If,

<sup>1</sup> *Statistische Tafeln über die Aenderungen in der Verteilung des Grundbesitzes im Königreiche Böhmen*, p. 191. Prag, 1893.

\* As a result of the general anxiety in regard to the dying out of the independent peasant class, a resolution was carried in the Bohemian Landtag, January 18, 1888, by which the land committee (Landesausschuss) was authorized to obtain statistics of the condition and changes in peasant proprietorship in Bohemia. The object in view was to determine whether or not it was desirable to enact a law fixing the limit of the divisibility of land. The report of 1893, to which reference has been made, embodies the results of the work of this committee.

TABLE I.  
NUMBER, AREA, ETC., OF FARM PROPERTIES IN BOHEMIA IN THE PERIODS 1861-1872 AND 1889-90.

	Over 200 Joch	100 to 200 Joch	50 to 100 Joch	25 to 50 Joch	10 to 25 Joch	5 to 10 Joch	1 to 5 Joch	Under 1 Joch	Total
NUMBER OF FARM PROPERTIES WITH AREA AS ABOVE.									
1861-1872.....	702	846	13,921	57,298	79,232	49,993	118,997	298,850	619,839
1889-90.....	1,407	1,159	11,210	46,982	76,694	64,708	218,111	323,797	744,068
TOTAL AREA OF PROPERTIES IN ABOVE CLASSES.									
1861-1872.....	1,560,590	106,605	872,182	2,011,455	1,340,989	364,833	298,870	67,765	6,623,294
1889-90.....	1,175,805	155,724	707,845	1,635,698	1,257,502	455,117	520,488	104,079	6,012,263
THE PROPORTION OF EACH CLASS WITH REFERENCE TO TOTAL AREA.									
1861-1872.....	17.29%	1.18%	9.66%	22.29%	14.86%	4.04%	3.31%	0.75%	
1889-90.....	14.19	1.88	8.54	19.74	15.17	5.49	6.28	1.26	
THE AVERAGE AREA OF THE INDIVIDUAL PROPERTIES IN EACH CLASS.									
1861-1872.....	2,223	126	62+	35+	16+	7+	2+	393 □°	
1889-90.....	835	134	63+	34+	16+	7+	2+	514 □°	

<sup>1</sup> From *Statistische Tafeln über die Aenderungen in der Verteilung des Grundbesitzes im Königreiche Böhmen*, pp. 33, 59, 85, 111, 139, 191, 217. Prag, 1893.

however, we take the normal peasant holding at thirty Joch,<sup>1</sup> there seems to be a tendency toward division.

It is a difficult question to decide as to whether the economic disadvantages to the country coming from this subdivision, and the decline of a stable class of peasant proprietors are not more than counterbalanced by the greater independence, freedom of movement, and incentive to labor which is offered to the agricultural laborer, in the possibility of acquiring land and through it partial economic freedom.

This is only one phase of the agricultural problem which today is one of prime importance to Bohemia.

*The decrease in the number of agricultural laborers.*—From the point of view of the large estate owner, or of the peasant proprietor, the growing scarcity of agricultural labor with its increased money cost, without what is claimed to be proportionate increased efficiency, taken in connection with the fall in the price of agricultural produce, makes the solution of the agricultural problem a life and death matter. For the agricultural laborer himself, the question today is, shall he stay upon the land? or do other countries and other industries offer inducements so much greater as to counterbalance the increase of real wages which has undoubtedly come to him since the revolution of 1848?

A glance at Table II\* will show that, with an increase of population in Bohemia between 1869 and 1890 of 10.4 per cent.,<sup>3</sup> there has been no proportionate increase in that part of it engaged in agriculture. On the contrary, in the twenty-one years there has actually been an absolute decrease. In 1890 the numbers were 30,000 less than in 1869; in other words there was a decrease of a little more than 2 per cent. The loss

\* A "Bauergut" is commonly estimated at ninety Metzen or thirty Joch of land.

<sup>1</sup> The years 1869 and 1890 are chosen for the reason that the data given by the census of occupations for these two years are said to be comparable. The first census of occupation taken in 1857 was made on a different basis, and that of 1880 was again different in certain particulars from any of the others. See *Oesterreichische Statistik*, vol. xxxiii. p. 3.

<sup>3</sup> The population of Bohemia in 1869 was 5,106,069; in 1890, 5,843,250.

TABLE II.

NUMBER OF PERSONS IN BOHEMIA ENGAGED IN AGRICULTURE (FORESTRY INCLUDED) IN THE YEARS 1869 AND 1890.

1869				1890				Per cent. of increase or decrease of totals
Independent	Officials <sup>x</sup>	Laborers	Total	Independent	Officials	Laborers	Total	
275,953	8,589	1,189,770	1,474,312	292,945	6,928	1,143,579	1,443,452	- 2 + % Percentage of decrease of laborers = 3 + Percentage of increase of independent = 6 +

NUMBER OF PERSONS ENGAGED IN TRADE (HANDEL UND VERKER).

62,935	7,489	60,335	130,759	79,496	24,261	98,974	202,731	+ 55 %
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NUMBER OF PERSONS ENGAGED IN INDUSTRY.

130,590	7,052	718,916	856,558	187,595	12,327	872,431	1,072,353	+ 25 %
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Figures taken from tables in *Oesterreichische Statistik*, vol. xxxiii. p. 70.

has been chiefly in the ranks of the laborers. The number of independent agriculturalists has increased 6 per cent.

If we compare the changes that have taken place in Bohemia with the corresponding changes in the empire as a whole we find that while the former has lost, the latter has gained over 12 per cent. in the number of its agricultural laborers. The increase of population in the same time has been a trifle over 15 per cent. But if we compare Bohemia with Lower Austria, the province of which Vienna is the center, we find that the loss of the latter has been still greater, amounting to a little over 5 per cent. When we compare agriculture with trade and industry we see that what the former has lost or failed to gain has gone to the latter occupation, "trade" having gained 55 per cent. and "industry" 25 per cent. in the twenty-one years.

<sup>x</sup> Officials = "Angestellt."

Ever since the revolution of 1848, and in fact antedating that time, there has been a triple movement of the agricultural population of Bohemia; (1) a movement from the country to Prague, Reichenberg, and other industrial centers of Bohemia itself; (2) a movement toward other Austrian provinces, particularly toward Lower Austria and Vienna; (3) an emigration "over seas," especially to America.<sup>1</sup> This latter movement seems to have been strongest in the last half of the eighties and the early nineties.

The reasons for this movement away from the country do not seem far to seek. The first causes, on the agricultural side, run back to pre-revolutionary times, and have been mentioned. They were to be found in the excessive feudal obligations which made it impossible for large families to be supported upon the land. The superfluous children were driven to seek a livelihood in other countries or in other parts of the empire. After the abolition of feudal obligations, custom rather than competition still regulated wages. The now free peasants received, for the work they had heretofore performed without pay, the same wages which the lords had been accustomed to pay for extra labor. In this respect agricultural labor was much slower to respond to outside influences than were other commodities. In spite of the rapid opening up of communication between different parts of the country, which brought the grain of the Bohemian farmer into the world market and caused its price to be fixed by factors outside the community, the same result did not make itself felt in the case of labor.

<sup>1</sup> Accurate statistics in regard to the emigration "over seas" are extremely difficult to obtain. The *Oesterreichisches statistisches Handbuch* for 1896 gives figures of the emigration from Austria exclusive of Hungary for the years 1877 to 1895 inclusive. These are said to be based on consular reports. For the nineteen years the total is 401,803. This seems to be a very low estimate. Dr. Raucheberg, in *Die Bevölkerung Oesterreichs*, estimates the emigration for the year 1880 at 38,663 for Austria exclusive of Bohemians or Poles, and 85,361 for Bohemians. For 1890 he fixes the numbers at 118,106 for the Bohemians and at 123,271 for the rest of Austria. (These estimates for Austria exclude Hungary.) These estimates he believes to be too low, but they are much higher than the figures given in the *Handbuch*, which for 1880 are 18,252, and for 1890, 38,125 for all Austria.



The term mobility can hardly be applied to such a movement as that from country to city—a movement that was entirely in one direction. That it was not mobile as between different agricultural sections—and that this remains true even today—is shown by the widely differing rates of wages in different districts.

On the other hand, the new independence of the peasants, the increase of literature at his command in his own language, with a consequently greater diffusion of information, the larger political power in the hands of the citizens of the towns, but most of all the greater economic opportunities seemingly offered by the industrial centers, were powerful factors in attracting the peasants away from the land.

The steady diminution in the number of agricultural laborers is recognized as a matter of vital importance in Bohemia. That the landowners as a class are alive to this is evinced in the fact that when the material was being gathered for the report of 1895 on agricultural wages in Austria, of the 1393 sheets of questions returned to the commission, 433, or nearly one third, came from Bohemia alone.

*The form of labor contract.*—The various forms of labor contract under which we find the farm laborer of Bohemia today are the result, in the first place, of the peculiar development of agricultural conditions due to the persistence of feudal relations down to the middle of the century. The division of the farm land into the large estates, with a more or less capitalistic organization and production on a large scale for the market, on the one hand, and the small peasant holdings on the other, has given rise to a variety of needs for which corresponding methods of supply have developed. Another factor has been, in later years, the great extension of special cultures, such as hops and grain for beer, beets for sugar, potatoes for distillation into brandy, etc.

In Bohemia we find almost all the forms of labor contract known to Austrian agriculture. According to Professor Inama Sternegg, the principal classes of labor are as follows:<sup>1</sup>

<sup>1</sup> Die landwirthschaftlichen Löhne in den im Reichsrathe vertretenen Königreichen und Ländern. Nach dem Stande des Jahres 1893. Bearbeitet vom Bureau der K. K. Statistischen Central-Commission. Wien, 1895.

1. *Farm servants* (Dienstboten).—These are usually employed by the year, live in the family of their employer and receive a money wage in addition to board and lodging.

2. *Laborers employed under contract*.—These are divided into (a) "deputatisten" and (b) day laborers.

a. The "deputatisten" are laborers, either men or women, usually engaged by the year, for the exclusive service of one employer. They do not live in the family of their master. They receive a money wage in addition to a house, the use of a piece of land and a stipulated quantity of wood and farm products.

b. *The day laborer bound by contract* is more difficult to characterize.<sup>1</sup> As a rule he is bound to give his services when required, to one employer, usually for a stipulated number of days in the year. He is often the owner of a small piece of land from which the greater part of his income is derived in the form of produce. He is glad, however, to add to this a small money income by contracting with the large proprietor to give a certain amount of labor during the busy season. He is paid by the day's work or by the job. (Zeitlohn or Accordlohn). The children of the peasant proprietors and of the "deputatisten" often belong to this class.

3. *The ordinary day laborer*, either male or female, who seeks employment wherever he can find it and is paid in money, with the addition during certain seasons of his meals and drink.

These day laborers are often the dependant members, wives, sisters, children, etc., of the "deputatisten." As a matter of custom they have the first claim on any extra work needed on the estate to which the head of the family has contracted his labor. Such is the present demand for laborers, however, in many parts of agricultural Bohemia that, in settling families as "deputatisten" in the dwellings belonging to an estate, preference is given to men with a large number of dependants of working age.

<sup>1</sup>Cf. DR. HERMANN VON SCHULLERN, "Die Lohnarbeit in der Oesterreichischen Landwirthschaft und ihre Verhältnisse," *Zeitschrift für Volkswirtschaft, Socialpolitik und Verwaltung*, vol. v. p. 10. Wien, 1896.

These various classes of labor shade into each other in all possible ways.

4. *The roaming laborers* (Wanderarbeiter) have come to be as important in many parts of Bohemia as they are in Prussia and Saxony. In Bohemia they come largely from adjoining Slavic countries and are usually called by the generic term "Slavoks." They are of both sexes and are engaged to work under contract during special seasons, such as the time of beet cultivation, grain and potato harvest, etc. They are lodged in rough "barracks" and fed by their employers, receiving in addition to board and lodging a small money wage. At the end of the season they return to their homes.

In different sections of Bohemia one or more of these various classes may predominate according to the size of the properties and the character of the culture. The "deputatisten" are to be found as a rule on the large estates in Eastern and Southern Bohemia where this class of labor is rapidly replacing the farm servant proper. Often as many as one hundred live upon one large estate.\* The small properties and the medium sized properties of the north and east are more apt to employ farm servants who live under the master's roof. The temporary contract labor is employed chiefly in the lowlands where the sugar beet is the important crop, but owing to the scarcity of labor it is being introduced into other sections during the harvesting season.

*Wages: the deputatisten.*—The "deputatisten" represent in many ways the best class of farm labor. A man of this class is secure in his position and often his real wages added to those of the other members of his family enable him to live quite as comfortably as the small peasant proprietor. In this class are found all grades of labor from the manager (Wirtschafter) to the plowboy.

The labor on the large estates is usually fairly well organized. When the estate is divided into a number of farms there is generally a manager for each farm and a director over all.

\* *Die landwirthschaftlichen Löhne*, etc., p. 8.

In the lowlands the managers are usually paid in cash, from 300 gulden a year upward, though even there he is often provided with a house and a cow as a part of his wages. In other districts he is paid, like the lower grades of labor, chiefly in produce.

On an estate of 2200 Joch,<sup>1</sup> in the district of Chotěboř, in eastern Bohemia, which was somewhat carefully studied in the summer of 1899, the three managers received respectively 50, 60, and 120 gulden per year. In addition each received 100 liters of beer, 100 liters of wheat, 1000 liters of rye, 200 liters of barley, 100 liters of peas, the use of 1 cow and of 450 quadratklasters of land, 14 cubic meters of wood, a dwelling, hens and other fowls, of a total value of 321 gulden per year, as estimated by the director of the estate.

The field overseers, of whom there are several on each large estate, receive wages varying from about 266 gl. yearly in the hill districts, to about one third more in the lowlands. The larger part of this is paid in produce. In the lowlands a larger money payment takes the place of the wood and use of a field. On the estate above referred to the payment of the overseers is as follows: Cash, 40–50 gl., 24 liters of beer, 100 liters of wheat, 800 liters of rye, 200 liters of barley, 100 liters of peas, 350 quadratklasters of field, 14 cubic meters of wood, 1 cow, hens, a house, usually of two rooms, and overtime paid for at double the rates of ordinary labor.

Below the overseers in rank come chief threshers, who have charge of the grain crops, shepherds, foresters, fodderers (Futterer), overseers of butter and cheese making, coachmen, store-keepers, etc., down to the common laborer, the most numerous class of whom are the teamsters and plowboys. Boys from fifteen to twenty years of age are often employed to drive the teams. They are paid from 30 to 50 kr. per day.

The regular plowmen and teamsters (Pferde- und Ochsenknechte), however, are usually men with families, employed for the entire year. They live in rooms furnished by the estate. Their money wages are small, the larger portion of their services,

<sup>1</sup> 1 Joch = 1.4219 acres.

as in the case of the other "deputatisten" being paid for in farm products. The following is an illustration of actual quantities paid, with the estimate of its money value at the current prices at time and place. [District Chotěboř, eastern Bohemia, June 1899.] Payment was made quarterly.

	Cash	Beer	Wheat	Rye	Barley	Peas	Field	Wood
Teamster (Pferdeknecht).....	48 gl.	15 liters	90 liters	480 liters	220 liters	100 liters	250 quadrat-klafter	6 cubic m. hauled in
Plowboy (Ochsenknecht) .....	40 gl.	[5 liters each at the harvest festival, "kirchweih" and "wallfahrts" feasts.]	70 kg. 9-10 kr. pro. kg.= 7 gl.	335 kg. 7-8 kr. pro. kg.= 26.8 gl.	150 kg. 8-8½ kr. pro. kg.= 12 gl.	80 kg. 10-11½ kr. pro. kg.= 8.80	Value of crop estimated at 18 gl.	about 3 per c. m. 12 gl.

The total value of the services was thus estimated at 138 and 130 gl. per annum, respectively.

On the same estate, if the teamsters are employed in drawing products beyond the limits of the estate, they are paid an extra allowance, varying according to distance, from 12 to 50 kr. per day. The latter sum is paid only on the large estates several hours drive distant from the railway, where the teamster must remain away over night.

In the lowlands the annual cash wages for teamsters rises from 48 gl. to 60 gl., and as high as 80 gl. in the neighborhood of large cities. The peasant farmers pay for similar labor 40 to 60 gl. and board, according to location.

If the wages on the estate specially studied may be taken as a fair average for the district, as was the opinion of the proprietor and his director, a comparison with the average wages paid in the same district in 1893 shows that the money wages paid today are higher for all the grades of labor. For the upper grades the cash value of the produce paid today is greater than in the early years of the decade, owing to the increase in the quantity, while in the lower grades there has not been a correspondingly large increase.

The wages paid in 1893, as reported by the Central Statistical Commission, are as follows:<sup>1</sup>

<sup>1</sup> *Die landwirthschaftlichen Löhne*, p. 40.

DISTRICT OF CHOTĚBOŘ, EASTERN BOHEMIA.

Grade of labor	Money wage	Estimated value of produce	Total
First manager.....	60 gl.	280 gl.	340 gl.
Second manager.....	50	260	310
First overseer.....	50	180	230
Second overseer.....	40	160	200
Teamster.....	37	100	137
Plowboy.....	34	100	134
Cattle girl.....	22	90	112

Each employee has a separate dwelling where possible.

The inequality in the rate of wages for the same sort of service in the different districts of Bohemia is illustrated by the following table<sup>1</sup> giving the wages of a teamster in different sections in 1893:

Place	Money wage	Portion of wages paid in produce or its estimated value
I. Königstadt ....	64 fl.	Wheat, 125 kg.; rye, 360 kg.; barley, 256 kg.; wood, 4 c. m. Use of $\frac{1}{2}$ metzen of land.
Kolin.....	60-70	Produce to value of 150 fl.
Pardubitz.....	180	1 liter milk per day, 1 hl. potatoes per month, wood, dwelling, light.
IV. Bilin.....	84	Bread, flour, potatoes, and milk to the value of 84 fl.
Bischofteinitz ..	144	$\frac{1}{4}$ of the milk of one cow, 200 □ ° land, medicine, free dwelling where possible.
Klattau.....	60	Produce to the value of 180 fl.
Nepomuck.....	144	Potato field and produce worth 32 fl.
VII. Planitz.....	40	Produce to the value of 140 fl.
(on large estate)		
VIII. Frauenberg.....	156-168	Free dwelling, wood, medicine, 6 hl. potatoes.
Weseli.....	88-108	Free dwelling, 5 c. m. wood, potato field of 200 □ °
Chotěboř.....	37	Produce to the value of 100 fl. Free residence where possible.
XII. Wildstein.....	100	Free dwelling, 8 hl. rye, 5 hl. barley, 12 hl. potatoes, 1 hl. pease, 1 l. milk daily, 20 q. coal, 2 c. m. wood. Payment monthly.
(on large estate)		

As a rule, the "deputatisten" seem to be best paid in those districts where there are fewest of them, that is, in the north and west, and more poorly paid in the south and east, where this is the prevailing type of farm labor. Even here they are more

<sup>1</sup> Compiled from different parts of Table III in *Die landwirtschaftlichen Löhne*, etc.

favorably situated as to wages than are those laborers who are paid by the day.

The certainty of regular and constant work throughout the year has been mentioned as tending to place the "deputatisten" at the head of the various classes of farm labor. This should be combined with a further circumstance. From the point of view of the laborer himself, the great advantage of position held by the "deputatist" over the ordinary farm servant or day laborer lies in the greater possibility of his becoming an independent proprietor.

The love of land seems as inborn in the Bohemian as in the French peasant. As has been noted, so far as comparative comfort is concerned there often seems little to choose between the life of a peasant proprietor and that of a permanent farm laborer. But added to the love of the land itself comes the additional incentive of the higher and more honorable position which the peasant proprietor holds in the community, coupled as it is with the political rights which in Bohemia go with the ownership of land. Then, too, a proprietor may bequeath his land to his son, who with this as a start may rise to much better things. Where family affection and pride is strong this is no mean inducement to thrift, and this thrift is made possible by the conditions of life of the "deputatisten." Each has his own dwelling in which he, with his family, carry on their individual housekeeping. This gives an opportunity to save, since they may live as sparingly as they please. As a part of their wages they are apt to have the privilege of cutting grass by the roadside or of pasturing there (under the surveillance of a very young or a very aged member of the family), a cow or at least a goat. Or they may even be allowed the use of a bit of pasture. The products from this animal furnish a great addition either to their table or to their money income.

As a result of their frugal life something is usually laid aside each year. In a few years they have saved enough to buy a tiny cottage with a small garden. A few years later a field is added. At the end of fifteen or twenty years service they own

a property of from four to five Metzen. They then leave service and set up farming on their own account. This will be on so small a scale that the head of the family can join the class of "day laborers bound by contract" for a certain number of days per year. If the family contains additional members who can go out to days work in the busy season, the men say as mowers, and the women and children as field laborers, they will earn more than enough to rent for themselves one to four Metzen of field in addition to what they own. They are then able to keep at least two cows and several goats and to live in considerable comfort according to the standard of Bohemian laborers.

According to the census of 1893<sup>1</sup> out of every 1000 day laborers engaged in agriculture in Bohemia seventy-three are entire owners and eighty are part owners of their dwellings. Twenty-one out of every 1000 are entire and twenty-seven are joint owners of a piece of land.

It should be noted in connection with the "deputatisten" that all through the agricultural sections where the large estates prevail are to be found artisans of various kinds who belong to this class. Unlike their fellows in town and city they still retain something of their feudal relations to the lords of the soil. They are engaged by the year and like other "deputatisten" receive as wages, in addition to a small money payment, the use of a dwelling, a piece of land and a stipulated amount of wood and farm produce.

Among the members of this class are blacksmiths, wagon-smiths, carpenters, brick and drain-tile makers. When there is no press of work on the estate the two former classes may add to their income by doing odd jobs of repairing for the peasant farmers of the neighborhood. These artisans take rank with the overseers in rate of wages and comfort of living. Brewers, distillers and cheesemakers are also sometimes included in this class.

*The day laborer.*—Women form a very important part of both the two classes of agricultural day labor, *i. e.*, the class bound

<sup>1</sup> *Die landwirthschaftlichen Löhne*, p. 5.



by contract to render all their service to one employer, and the class which works casually by the day.

The following statement in regard to one woman, working on a large estate, was taken from the books of her employer. It shows the kind of work for which women are employed, the wages they can earn at such labor, and the length of the working day at different seasons of the year.

This was one of the most favorably situated women in the district in which she lives. She was the wife of one of the contract-bound laborers and had employment almost constantly. Her earnings are above the average of those in her class.

AVERAGE EARNINGS OF A WOMAN EMPLOYED IN A "MEIERHOF" ON A LARGE ESTATE IN THE DISTRICT OF CHOTĚBOŘ, EASTERN BOHEMIA. FOR THE YEAR 1898.

*January.*—An average of 25 working days; hours from 8:00–12:00 A. M., 1:00–3:30 P. M.,  $7\frac{1}{2}$  to 8 hours. Wages 20 kr. per day. Work for the most part with the steam threshing machine, cleaning grain. Was away from work 2 days.

Earnings, 23 days - - - - - 4.60 gl.

*February.*—23 working days. Hours as in January. Wages 16 kr. per day. Worked at cleaning grain, hand threshing, preparing manure for spreading, etc. Was away from work 3 days on account of carnival holidays.

Earnings, 20 days- - - - - 3.20 gl.

*March.*—24 working days, 16 kr. per day was paid up to the 15th. But the woman was employed 5 of these days in making straw bands, for which she was paid by the piece, at the rate of from  $2\frac{1}{2}$  to 3 kr. per shock (60 units), according to quality. By a short day's labor the woman earned 30 kr. per day.

Therefore, 10 days @ 16 kr. - - - - - 1.60 gl.

5 days @ 30 kr. - - - - - 1.50

From the 15th of March 20 kr. per day was paid. The woman, however, was unable, on account of home duties, to work more than 8 days. Two of these days were employed in preparing manure and was paid for by quantity done.

She earned 35 kr. per day, or - - - - - .70

The remaining 6 days were spent in helping to get fields ready for crops, by removing weeds, loading

manure, unloading potatoes, sorting them, cutting them ready for seed, etc. Hours (nominally from 6:00 A. M.) really from 7:00-12:00 A. M.; 1:30-5:30 P. M.; 9 to 10 hours.

Wages—6 days @ 20 kr. - - - - - 1.20

Total for March - - - - - 5.00 gl.

*April.*—23 working days. Hours 6:30-12:00 A. M.; 1:30-6:00 P. M.; 10 hours.

Earnings, 21 days @ 25 kr. - - - - - 4.25 gl.

2 days "piece work" - - - - - .70

Total for April - - - - - 4.95 gl.

*May.*—24 working days. Hours 6:30-12:00 A. M.; 1:30-7:00 P. M.; 11 hours. Wages at 25 kr.

Earnings, 24 days - - - - - 6.00 gl.

Overtime, 12 days - - - - - .60

Total for May - - - - - 6.60 gl.

*June.*—23 working days @ 25 kr.

Earnings - - - - - 5.75 gl.

Overtime, 12 days - - - - - .60

Total for June - - - - - 6.35 gl.

Work in April, May, and June chiefly planting and hoeing, Hours in May and June as in April.

*July.*—26 working days. 10 days common labor, spreading hay and hoeing beets and potatoes:

At 25 kr. per day - - - - - 2.50 gl.

5 days, "piece work" in cutting rape and in hoeing beets:

At 50 kr. per day - - - - - 2.50

6 days with overtime - - - - - 1.80

5 days, "piece work" in cutting - - - - - 3.00

Total for July - - - - - 9.80 gl.

*August.*—26 working days.

Harvest { 6 days without overtime - - - - - 1.50 gl.

{ 10 days with overtime - - - - - 3.00

{ 10 days, "piece work" - - - - - 6.00

10.50 gl.

*September.*—24 working days, cultivation of potatoes.

10 days without overtime - - - - - 2.50 gl.

10 days with overtime - - - - - 3.00

4 days, "piece work" - - - - - 3.20

8.70 gl.

*October.*—24 working days.

4 days without overtime - - - - - 1.00 gl.

20 days, "piece work" - - - - - 18.00

19.00 gl.

*November.*—24 working days.

8 days, "piece work"	-	-	-	-	-	4.80 gl.
16 days without overtime	-	-	-	-	-	4.00
						<hr/> 8.80 gl.

*December.*—23 working days.

At threshing -	-	-	-	-	-	7.50
						<hr/>
Total for year	-	-	-	-	-	95.00 gl.

It will be seen that this woman worked 283 days in the year. The hours of work varied from 8 in winter to 12, 13, and 14 in summer, when "overtime" means work until dark. When paid by the day she earned from 16 to 25 kr., with 5 kr. extra in the days when she worked overtime. That is, she earned from six cents to ten cents per day, with two cents extra for an overtime of sometimes three hours. But on 61 days in the year she worked "by the job" (Accordlohn), and in October for 20 days she earned as much as 90 kr., or 36 cents per day. This brought her total earnings for the year up to 95 gl., or about \$38.00. The character of the work, it will be seen, was extremely varied. She cleaned grain, in connection with the steam threshing machine, did hand threshing, turned and loaded and spread manure, plaited straw bands, loaded and unloaded potatoes, sorted and cut them for planting, helped plant, did hoeing and hand weeding, turned and raked hay, cultivated beets and cut grain.

On 82 days in the year she did not work for wages. Of these 52 were Sundays. The remaining 30 were holidays, or devoted to household duties, for this woman, being a wife and mother, was also a housekeeper.

In addition to her money wages every permanent woman employee on this estate has the use of a piece of pasture or grass at a nominal price. If her husband also receives the use of a piece of land as part wages, they can combine forces and keep a cow. If only one has the use of grass they must content themselves with a goat.

Often during the grain harvest a half liter of beer per day is served to each worker, and a half liter of brandy is served to each daily, through the potato harvest. During hay or grain

harvest, when it is necessary to work in the afternoons of Sunday (morning being left free for church service), and on holidays, under the same circumstances, the laborers are paid a whole day's wages for one half day's work. This applies to men and women alike.

In the lowlands, where the sugar beet culture is carried on extensively, and in the neighborhood of cities, wages are considerably higher than in other districts. In case a working woman is not engaged for the entire year, she can in winter earn at least one third more by day's work, and in summer as much again per day as the wages quoted above. During the season of the beet cultivation an industrious working women can earn from 1 gl. to 1.50 gl. per day.

In the beet-growing districts it is less customary than elsewhere to serve the workers with beer and brandy.

With the small peasant proprietors, when extra work-people are engaged only for special work at the busy season, the women receive about the same money wage as is paid on the large estates of the neighborhood, but receive their food in addition to this. Owing to the enticements of city life, and to foreign emigration, it is becoming more difficult each year, both for the large estate owners and the peasants, to secure unmarried girls to tend the cattle (*Viehmagd*). The large estate owners employ chiefly the wives of their farm hands. The peasants, who have no accommodations for families on their small farms, are obliged to pay constantly increasing wages. The customary wages have been 24 gl., yearly, with board and lodging, a new dress, and perhaps a pair of shoes at Christmas. Now it is not uncommon for a peasant to pay 32 gl. A specially skillful girl can sometimes command as much as 4 to 5 gl. per month.

*Day wages of men.*—A man's wages at day labor are as a rule about one third higher than a woman's at the same time and place. In the different districts of Bohemia there is quite as wide a difference in the price paid for day labor as in the wages of "deputatisten." Thus, from the tables given in the report of 1895, we find that during the season of cultivation,

wages, with board, varies from a minimum of 20–50 kr. per day to a maximum of from 35–120 kr. In harvest time the range is from a minimum of 30–60 kr., to a maximum of from 45–200 kr.; during the remainder of the year the variation is from a minimum of 20–35 kr. to a maximum of from 30–100 kr.<sup>1</sup>

Wages without board run from 25 per cent. to 40 per cent. higher. Thus the rates are: for the season of cultivation, minimum, 30–70 kr.; maximum, 70–150 kr.; in harvest, minimum, 35–80 kr.; maximum, 120–250 kr.; for the remainder of the year, minimum, 30–60 kr., and maximum, 70–150 kr.<sup>2</sup>

When we come to consider the cost of living, in detail, we shall find that those who are paid entirely in cash are the most unfavorably situated, so far as real wages are concerned.

Harvesting is largely paid for in proportion to surface cut. Thus, for mowing grass and clover the common rate is from 50–80 kr. per Metzen.<sup>3</sup> For mowing grain the rate is from one fourth to one third more, according to necessity, the scarcity of labor being greater in some seasons than in others. The taller the grain, as a rule, the higher the rate. Upon the estate in eastern Bohemia to which reference has already been made, the average rate of payment for the grain harvest is 50 kr. per Metzen, to which is added one liter of beer and one half kilo of bread.

*Changes in wages in the last half-century.*—To arrive at anything like an accurate conclusion as to the gain made in real wages by the agricultural laborer of Bohemia in the last half-century, is a matter of extreme difficulty. Trustworthy data as to wages paid, as well as to market prices of farm produce, and of commodities used by the laborers, are difficult to obtain in sufficient number. Owing to the lack of uniformity in rates of wages it would be necessary to study each district, or, at least, typical districts, by themselves; owing to the variety of classes of laborers each class represented should be studied separately and

<sup>1</sup> *Die landwirthschaftlichen Löhne*, pp. 14–15.

<sup>2</sup> *Die landwirthschaftlichen Löhne*, pp. 14, 15.

<sup>3</sup> One Metzen, land surface, =  $\frac{1}{2}$  Joch.

in detail. Sufficient material for such a study has not yet been collected by the writer. Only a few somewhat general considerations can therefore be indicated.

The interest of the Bohemian peasantry in the course of agricultural wages and in the price of farm products is complex. So far as he is an independent producer for the market, market prices of wheat, rye, etc. determine his prosperity. So far as he is a landless farm laborer, paid entirely in money, the price of the chief food products is the important factor to his real wages. Probably one half the agricultural population comes between these two extremes. In 1890 out of every 1000 men engaged in agriculture, 390 are classed as independent;<sup>1</sup> 454 as farm laborers of whom 103 live in the families of their masters and 351 are "deputatisten," and 151 are classed as day laborers. Of every 1000 women only 43 are independent, 141 are day laborers, and of the balance 121 live in the families of their masters while 695 are "deputatisten."

Thus a large proportion either own a little land from which most of their food comes, while their money wages goes for taxes, clothing, etc., or they are "deputatisten," paid a customary amount of produce which does not vary in quantity. In either of these cases they are not directly affected by the market price of farm products. The day laborer paid entirely in money is most directly affected by the current rate of wages and these money wages seem to have changed more in recent years than wages paid in produce.

The report of the Chamber of Commerce of Prague for 1851 gives some data as to agricultural conditions for the two districts within its jurisdiction; *i. e.*, the district of which the city of Prague is the center, and the Pardubitz district, lying to the east and including a portion of the country lying in the Moravian boundaries. So far as they go the figures given for the latter district are fairly comparable with those given for the estate in Chotěboř. These data are shown in Table III. It is pretty generally conceded that the Chamber of Commerce reports as

<sup>1</sup> *Die landwirthschaftlichen Löhne, etc.*, p. 3.

to wages do not underestimate them. They can safely be taken to represent the highest rates current. And owing to the competition of the city for labor the wages in the district immediately around Prague are probably as high as any in the kingdom.

According to these estimates the wages of the agricultural male laborer paid by the day in cash, in the district around Prague vary in 1850 from 21 to 33 kr.<sup>1</sup>

TABLE III.

WAGES OF AGRICULTURAL LABOR IN 1850.<sup>2</sup>

Kind of labor	District about Prag	Pardubitzer district
A strong farm hand, if we reckon his board in money according to current food prices, and add his money wage of from 26.25 fl. (ö. W.) to 31.50 fl. for the year, receives .....	ö. W.	ö. W.
A less efficient laborer, with a money wage of from 21 fl. to 25.20 fl. with board, receives.....	105 fl.	94.50 fl.
Boy under 14 years, with board, and money wages of from 6.30 fl. to 8.40 fl., receives.....	98.70	84
A capable woman, with board, and money wages of from 16.80 fl. to 18.90 fl., receives .....	73.50	63
A less capable woman, with board, and money wages of from 12.60 fl. to 15.75 fl., receives.....	84	73.50
A girl under 14 years, with board, and money wages of from 5.25 fl. to 6.30 fl.....	80.85	69.30
An industrious man at agricultural labor by the day receives for a 12-hour day, from April until October, per day.....	72.40	63
A less efficient day laborer receives per day.....	31 kr.	26 kr.
Children of both sexes, under 14 years, for easy work in field and meadow, receive.....	21	17.5
An industrious woman receives at field work per day.	14	10.5
A less efficient woman receives per day.....	24	21
Laborers paid by the day but engaged to work 300 days in the year receive	17.5	14
Men, per day.....	33	29
Women, per day.....	27	24
Children under 14 years, per day.....	24	21

In 1893 for the same district they are put at from 60 to 90 kr.<sup>3</sup> or almost three times as much. In Pardubitz, in 1850,

<sup>1</sup> In all cases money values are reduced to the present Austrian standard. ö. W. = oesterreichische Währung.

<sup>2</sup> *Statistischer Bericht der Handels- und Gewerbehämmer in Prag, Prag, 1851, pp. 28 and 29.*

<sup>3</sup> *Die landwirthschaftlichen Löhne, p. 7.*

wages for the same sort of labor vary from 17.5 kr. to 29 kr. In 1899 at Chotěboř a man working by the day would receive possibly from 25 to 50 kr., the increase in money wages thus appearing to be less in the districts more remote from the city.

An industrious woman at day labor does not appear to have gained as much as her brother man. In 1850 she is already earning from 21 to 24 kr. in the Pardubitz district, and the woman in the neighborhood of Chotěboř, described in a preceding section, is today paid only from 16 kr. to 25 kr. when hired by the day.

It will be noted that the "strong farm hand" who receives his board in addition to a money wage, gets from 26.25 fl. to 31.50 fl. in 1850. If we compare this with the money wages paid to plowboys and teamsters in Chotěboř, we will find far less difference than between the money wages paid at Chotěboř and other sections of the country, at the present time. But in 1850 the board of the laborer is reckoned at about 74 fl. per year while in 1899 he receives in addition to his money wage produce valued at 100 fl.

The three staple articles of food for the agricultural laborer as well as for the common laborer of the towns and villages throughout Bohemia are wheat, rye, and potatoes. The two latter commodities are, however, more freely used than is wheat.

Dr. Raucheberg, in his book *Die Bevölkerung Oesterreichs*, has constructed a table showing the variations in the price of a hectoliter consisting of equal parts of wheat, rye, and potatoes, as a basis for a computation of changes in the real wages of common labor throughout Austria.

For the sake of comparison the writer has constructed a similar table of prices for Bohemia.<sup>1</sup> That portion of it relating to the years 1850-1881<sup>2</sup> is as follows:

<sup>1</sup> The figures used as a basis are those for average prices of wheat, rye, and potatoes in Bohemia, given in the market reports of *Tafeln zum Statistik der Oesterreichischen Monarchie 1828-1865*, and in the *Statistisches Handbuch der Oesterreichischen Monarchie 1863-1881*.

<sup>2</sup> After 1881 the form of the market report changes so that the data are no longer comparable.



Years	Price of hectoliter of equal parts of wheat, rye, and potatoes	Years	Price of hectoliter of equal parts of wheat, rye, and potatoes	Years	Price of hectoliter of equal parts of wheat, rye, and potatoes
1850.....	3.54 gl.	1860 ....	6.17 gl.	1870 ....	6.05 gl.
1851.....	4.97	1861 ....	6.54	1871 ....	6.44
1852.....	5.96	1862 ....	5.55	1872 ....	6.56
1853.....	6.05	1863 ....	4.73	1873 ....	7.59
1854.....	8.16	1864 ....	4.30	1874 ....	7.38
1855.....	8.35	1865 ....	4.56	1875 ....	5.83
1856.....	6.09	1866 ....	5.67	1876 ....	6.29
1857.....	4.55	1867 ....	7.33	1877 ....	6.51
1858.....	4.61	1868 ....	6.86	1878 ....	5.51 (decade 6.38 average)
1859.....	4.98	1869 ....	5.76	1879 ....	5.68
Decade ..	5.72 (average)	Decade..	5.74 (average)	1880 ....	6.43
				1881 ....	6.34

It will be noted that although the price varies from year to year within considerable limits, yet for the first two decades there is a difference of only 2 kr. in the averages for those periods. In the seventies the price never goes as low as in the preceding years, and the average is 64 kr. higher. Since the year 1850 the prices of farm products in Bohemia have followed very closely the prices of Austria, from 1870 on being somewhat lower. According to Dr. Raucheberg the eighties was a decade of steadily falling prices in the empire. As this was true of most other countries as well, it is undoubtedly true of Bohemia. For the decade 1890-1900 no comparable data are at hand.

According to the same sources of information, the level of wages of common labor has been constantly rising in Bohemia as well as in the empire, since 1850. The average day's wages paid in money, without board, from 1850 to 1876 inclusive, in Bohemia were:

Years	Wages per day	Years	Wages per day	Years	Wages per day
1850 .....	32 kr.	1860 .....	49 kr.	1870 .....	62 kr.
1851 .....	38.75	1861 .....	52	1871 .....	95
1852 .....	42	1862 .....	49	1872 .....	93
1853 .....	45.5	1863 .....	52	1873 .....	99
1854 .....	45.5	1864 .....	52	1874 .....	96
1855 .....	45.5	1865 .....	50	1875 .....	97
1856 .....	45.5	1866 .....	66	1876 .....	115
1857 .....	46	1867 .....	68		
1858 .....	46	1868 .....	58		
1859 .....	47	1869 .....	56		

Since 1876 there has been no general rise of wages proportionate at all to the rise of the preceding twenty-five years. If, now, we express the real wages<sup>1</sup> of common labor by the number of days required to earn a hectoliter composed of equal parts of the three food stuffs, we have as follows:

Years	Real wages	Years	Real wages	Years	Real wages	Years	Real wages
1850 .....	11	1857 .....	9.8	1864 .....	8.2	1871 .....	6.7
1851 .....	12.8	1858 .....	10	1865 .....	9.1	1872 .....	7
1852 .....	14.1	1859 .....	10.5	1866 .....	8.5	1873 .....	7.6
1853 .....	13.2	1860 .....	12.5	1867 .....	10.8	1874 .....	7.5
1854 .....	17.9	1861 .....	12.5	1868 .....	11.7	1875 .....	6
1855 .....	18.3	1862 .....	11.9	1869 .....	10.2	1876 .....	5.4
1856 .....	13.3	1863 .....	9	1870 .....	9.7		

The combined effect of the rise of money wages and the general fall of food prices is a decided rise in real wages. For the decade 1850-1859 the average is expressed by the number 13.09, for the decade 1860-1869 it is 10.44, and for the seven years 1870-1876 it is 7.12.

With a continued fall in the price of staple foods and a steady if not a rising rate of money wages, real wages expressed in this way for the years following would show a considerable rise.

The estimates given above are made, not for agricultural labor alone, but for common day labor throughout Bohemia. But as the official returns, which are the basis of the estimates, are made from *all* districts, including large agricultural areas, a large percentage of the laborers whose wages are included would probably be those working upon the land. So far as the personal impression of the writer goes, based upon such material as has been accessible, it seems safe to say that the rates of common labor are not far from those of farm labor in their respective districts, and that the figures might be taken as fairly representative of the changes in the condition of the best paid class of farm labor.

The important point here is not the absolute gain in real wages for the agricultural laborer, but the fact that owing to the

<sup>1</sup> It will be noted that the value of the real wages are inversely proportional to those of the figures representing them. The method is that of Dr. Raucheberg.

various causes indicated there has been a gain. For the "deputatisten" at least this gain has taken place not only in that part of real wages which is made up of food, but also in relatively better housing.

The chief improvement in housing comes not so much from any change in the type of house, the material of which it is built, or even in its furnishing. It is due to the fact that there is a growing inclination on the part of the large estate owners to give each family a dwelling to itself. This dwelling often consists of a single room. These rooms are apt to be located in the buildings which form the four sides of the stable yard. Each of the separate farms, into which the large estates are divided, has such a group of buildings, called the "Meierhof." They include the stables, barns, wagon sheds, calf pens, sheep sheds, etc. Built of the same material and in the same style, the dwelling houses are scarcely distinguishable, exteriorly, from the other buildings. They are commonly built of stone, one or two stories in height. The windows are small. The doors open directly into the central stable yard. There are likely to be connecting doors between the various rooms, and also between the living rooms and the stables. Occasionally there is a narrow hallway on the second floor, from which the different rooms open. The interior walls are sometimes plastered and sometimes simply whitewashed. The floor may be boards, bricks, or hard-packed earth.

As a rule today the large estate owners are attempting to encourage better living by assigning only one family to each room. But even now there are many exceptions. When the rooms are large and not easily divisible, two or even three families may be found in one room. The testimony of the older proprietors is, however, to the effect that they have seen great improvements in this respect in their own lifetimes. Twenty-five years ago one family to a room was the exception rather than the rule.

No doubt the great emigration from the rural districts and the increasing difficulty in keeping competent laborers upon the

farms has had its effect in this direction, as well as the growing recognition of the landlords of the importance of improved housing as a factor of increased efficiency of labor.

In spite of the increase in his money wages, a larger real wage—better housing conditions, better educational advantages, and fewer restrictions of all sorts—the economic advantages upon the farms, whether large or small, are not sufficient to check the movement toward the cities and toward foreign lands. The Bohemian farmer is facing a difficult problem, and one which the political situation of the Austrian empire, as well as of the kingdom, renders still more complex.

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## WATER RIGHTS IN THE ARID WEST.

THE great problems of irrigation are not strictly agricultural questions. Agriculture by irrigation has been uniformly successful where the proper method of applying an abundant supply of water has been the only problem for solution. Given a good supply of water, always available, and farming in the arid West is ideal—a climate noted the world over for its healthfulness; crops estimated to be double those raised by rainfall; a full crop every year; and, up to the present and for some time to come, a home market at high prices for everything raised, except fruit in California.

Exact statistics as to the area thus cultivated, or of the area susceptible of irrigation, are not to be had, as neither the states nor the general government have thus far compelled the keeping of any complete records of what has been done, or made full surveys of the lands and measurements of the water. Various estimates of the area susceptible of irrigation have been made, however, by those in positions to know all that can be known at present on this subject. Maj. J. W. Powell, formerly director of the United States Geological Survey, estimated that 150,000 square miles, or 96 million acres, of the land in the arid region could eventually be irrigated.<sup>1</sup> In his testimony before the House Committee on Irrigation, in 1890, Major Powell again estimated the area irrigable from perennial streams at 100 million acres.<sup>2</sup> To this area was to be added all that could be irrigated from wells, stored storm waters, and any other sources. F. H. Newell, chief hydrographer of the United States Geological Survey, estimates the irrigable area at 74 million acres.<sup>3</sup> The House Committee on Public Lands, in reporting a bill reducing the price of desert lands, in March, 1900, gives the area of irrigable public land as 100 million acres.<sup>4</sup> and adds: "At the rate at which desert land has been entered for the last ten years under the desert land law it would take about 500 years to reclaim the irrigable land of the United States." These estimates

<sup>1</sup> *Tenth Annual Report U. S. Geological Survey* (1888-9), Part 2, p. 14.

<sup>2</sup> *Eleventh Annual Report U. S. Geological Survey*, Part 2, p. 204.

<sup>3</sup> *Sixteenth Annual Report U. S. Geological Survey*, p. 494.

<sup>4</sup> *House Report No. 875*, LVI Congress, first session, p. 6.

how that there is public land to the extent of from 75 to 100 million acres, susceptible of irrigation, which can be had for the cost of homesteading, or of entry and reclamation under the desert land laws. Under the latter law the price of public land is \$1.25 per acre, and the settler must reclaim the land—that is, provide a means of irrigating it. In the report above referred to the House Committee on Public Lands estimates the average cost of this reclamation at \$10 per acre. In addition to the public land there are large areas of railroad and state lands. These railroad lands can be had for from 50 cents to \$10 per acre,<sup>1</sup> and state land in Wyoming has an average value of about \$1 per acre.<sup>2</sup>

To sum up the present situation, then, in a few words: We have in the arid West some millions of acres of land so farmed as to produce every year crops larger than the best crops raised in the best years in that part of the country where dependence is placed upon rainfall, at least 100 million acres of land susceptible of the same kind of culture, which can be had at prices ranging from 50 cents to \$10 per acre, and which in its present condition yields an income ranging from nothing to 5 cents per acre per year, and which is being taken up at such a rate that 500 years will hardly see it reclaimed.

Looking at these conditions, the most natural question is, What is the matter?

As was said above, wherever the only question is how to use an abundant supply of water, always available, irrigated agriculture has been successful. There are degrees in this success, and there is room for much improvement along the line of raising more remunerative crops, of economy in the distribution of water, and in other directions, but those things come naturally with development, and are not a hindrance to further progress, but rather invite investment.

The great hindrances to the spread of agriculture by irrigation in the West may be brought together under two heads: The failure of capital and labor to get together on some just basis, and the unsettled condition of titles to water.

We say the failure of capital and labor to get together, for the reason that a settler with nothing but his own labor and that of his team cannot make a home for himself in the arid West. Conditions

<sup>1</sup> See *Advertising Circulars of the Union Pacific Railroad Company*, Omaha, 1899.

<sup>2</sup> See *Report of the Register of State Board of Land Commissioners*, Wyoming, 1897-8.

differ widely from those which existed in the great central West when it was settled under the homestead law. Then all that was necessary was to break the sod and plant crops, and a settler coming to the land could, almost from the start, support himself and family. It required almost no capital but a team and a few implements. When farming began in the arid region it required very little more capital than in the central West, because the pioneers took up the level bottom lands, where each farmer or a few neighbors could in a short time with their own labor build the ditches necessary to water the land. But the areas which could be reclaimed in this way are naturally limited, and were soon taken up. The larger part of the land now reclaimed, and most of that which will be in the future, lies back from the streams where neither the individual settler nor a few neighbors working together can come in and build their ditches and begin at once to support themselves. Large outlays of labor and capital are necessary before any crops can be raised. For this reason the arid West cannot be settled, as was the middle West, by an army of poor men. The capitalist must go with the settler or precede him, and build the ditch, and keep the settler while the land is being brought into condition for cultivation, and give him time to pay for his rights in the ditch.

While individuals and small co-operative companies have in the past reclaimed much land, they do not enter into the consideration of the future of irrigation, for the reasons just stated.

The large canals of the present have been built by corporations organized for the purpose of dealing in water. Some of them united with this a speculation in land, by buying the land under their ditches and selling land and water rights together. Such corporations have reclaimed large areas, but have almost invariably been financial failures. This failure has been so notorious that the statement is frequently made that not one such ditch company in the United States has been a financial success. While such an extreme statement may not be true, the fact that such corporations have generally failed goes undisputed.

The immediate cause of these failures has in most cases been the inability to secure enough settlers upon the lands which the canals are built to water. The fundamental cause of the failure to get settlers is the water-right system. Water rights are of two kinds, those obtained by appropriating water direct from streams, and those obtained from a corporation by purchase, the corporation holding the direct right from

the stream. The two classes of rights differ essentially in one particular. The appropriator from the stream obtains a right to take a certain quantity of water from the stream whenever he needs it, provided it is in the stream—that is, he obtains a right to water. The purchaser of a water right from a ditch company gets a right to receive water from the company by paying for it—that is, he can get no water on his water right until he has not only paid for the water he is to receive, but has in addition paid for the right to pay for the water. This is shown by the following extract taken from a contract used by a Wyoming canal company :

Witnesseth : That the said party of the first part, for and in consideration of the sum of . . . . . dollars, paid to the party of the first part by the party of the second part, . . . . . does sell . . . . . unto the said party of the second part, . . . . . heirs, executors and assigns, the right to have, receive and use water from the canal of the said party of the first part for the purpose of irrigating the following described land . . . . .

And it is further agreed by and between the parties hereto, that before the party of the second part shall have the right to demand or receive water for irrigating said land, under this agreement, from the canal of the party of the first part, said party of the second part shall make and execute a further agreement with said party of the first part, for the use of said water . . . . . , which last mentioned agreement shall, among other things, provide for the payment of an annual water rate to be fixed by the party of the first part.

Not only must the farmer pay for the right to receive water, and then pay for the water, but he must pay whether he gets the water or not. There is a substantial agreement in nearly all water-right contracts in this regard, so that the following, taken from a Nebraska contract, may be considered typical. After the usual paragraphs stating that the canal company, for a certain consideration, sells to the purchaser certain water rights, and providing for deferred payments on the purchase price and for annual assessment, comes the following :

It is hereby distinctly understood and agreed by and between the parties hereto, that in case the canal of said company shall be unable to carry and distribute a volume of water equal to its estimated capacity, either from casual or unforeseen or unavoidable accident, or if the volume of water prove insufficient from drouth, or from other cause beyond the control of said company, the company shall not be liable in any way for the shortness or deficiency of supply occasioned by any of said causes.

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And the said second party, in consideration of the promises, hereby agrees that . . . . . will make punctual payment of the above sums, as each of the



same respectively becomes due, and that . . . will regularly and seasonably pay all assessments that may hereafter be imposed by said company for the purposes aforesaid. And it is hereby agreed and covenanted by the parties hereto, that time and punctuality are material and essential ingredients of this contract. And in case the second party shall fail to make the payments aforesaid, and each of them punctually and upon the strict terms and times above limited, and likewise to perform and complete all and each of said agreements and stipulations aforesaid, strictly and literally without any failure or default, then this contract, so far as it may bind said first party, shall become utterly null and void, and all rights and interests hereby created or then existing in favor of the second party shall utterly cease and determine, and all equitable and legal interest in the water rights hereby contracted to be conveyed shall revert to and revest in said first party, without any declaration of forfeiture, or any other act of said first party to be performed, and without any right of said second party of reclamation or compensation for moneys paid, or services performed, as absolutely, fully and perfectly as if this contract had never been made.

That is, if from any cause beyond its control, the canal company fails to furnish the water contracted for, it loses nothing; but if from the same cause, indirectly, and directly through the failure of the canal, the farmer fails to make his payments "punctually and upon the strict terms and times above limited," he loses all he has paid, no matter if it is the final payment on his water right which he fails to pay on time.

It will probably be said that "capital is shy," and must have assurance of a regular return on the money invested, but the event has proved that in this case labor is equally "shy," and with good reason.

A modification of this system which has met with some success, does away with the old water rights and sells in their place shares of stock in the ditch company, so that the canal will ultimately be owned by those using the water; but there has been no general adoption of this system.

The laws of Idaho (laws of 1899) prohibit the selling of water rights and provide that water companies shall furnish water to anyone applying for it, giving preference to those having used water from the canal before. This would put canal companies on much the same footing as city water companies. It is doubtful whether this will succeed, for the reason that neither the canal company nor the farmer is bound in any way for any term of years, and there is not sufficient guaranty for the future to justify the company in building a canal or the farmer in preparing his land for irrigation.

Another method of uniting capital and labor, which was hailed as the solution of all the difficulties standing in the way of irrigation development, is the organization of irrigation districts. This system had its birth in California in 1887, with the passage of the famous Wright law. Under the Wright law the people of a locality capable of being watered from a common source of supply could organize themselves into an irrigation district, and issue bonds which were to be a lien upon the real property of the district. The essential feature of the system was that not merely the property of those wishing to organize the district and to use the water supply when provided was taxed to pay the bonds, but all the property in the district, unless it was excepted through certain forms provided in the law.

This law was made use of to unload undesirable property upon people having no direct interest in irrigation; bonds were sold, and then the attempt was made to repudiate them, until the system came into such disrepute that districts could find no market for their bonds; and the irrigation district system has proved a failure so far as reclaiming any considerable area of land is concerned not only in California<sup>1</sup> but elsewhere.

The weak points in the district system seem to be the possibility of abuse, in including property in the district which is not benefited by the works of the district, and the inability of districts to sell their bonds. If no property is included but that directly benefited, an ordinary incorporation of those forming the district will serve as well as a district organization, and will be less expensive. The whole purpose of the district is to obtain money to build irrigation works, and no matter how perfect the system may be, theoretically, if it fails in this one point it is a total failure.

A study of the half century of irrigation development in arid America shows that some co-operative companies have succeeded, some few corporations have been financial successes, and a few districts have been successful; but the fact remains that up to the present time no generally successful system of uniting capital and labor in large irrigation enterprises has been worked out.

The second and the greatest hindrance to further development of irrigated agriculture is the unsettled condition of titles to water. The general principles upon which water titles are based are well settled.

<sup>1</sup> *Inaugural Address of Governor Gage*, January 4, 1899.

Titles to water from the streams of the arid region are acquired by appropriation, and priority in time of appropriation gives priority of right, and the water appropriated must be put to a beneficial use.

That is, the way to acquire the right to take water from a stream, is to take it and use it; and if at any time there is not enough water in the stream to supply all those wishing to use it, they shall be supplied in the order in which they first used water from that source.

But the general principles are the only things about water titles which are well settled. The application of the principle of prior appropriation is anything but settled. Many streams flow through the territory of more than one state. Each state has granted rights to the water of such streams regardless of the rights of prior users farther down on the same stream in another state. The United States courts have decided<sup>1</sup> that this should not be done, and that an appropriation in one state was good as against a subsequent user above in another state. Notwithstanding this decision the supreme court of Colorado recently decided<sup>2</sup> that in adjudicating rights to water Colorado courts cannot take into consideration any diversion of water for use in New Mexico, even though the diversion is in Colorado.

During the last year the state of Kansas has begun suit in the United States Supreme Court against the state of Colorado, charging that the Arkansas River was being diverted in Colorado to the injury of Kansas farmers.

These citations are sufficient to show the situation regarding rights on interstate streams. Within the states the same condition prevails between water districts. Most of the states are divided into water districts, for purposes of administration. Many streams are in more than one district, and often a main stream is in one district and some of its tributaries are in another. Sometimes rights in these districts are adjudicated entirely independent of rights on the same stream in another district, or of rights on the main stream or on the tributaries, as the case may be. In other cases it is held that streams must be adjudicated as a whole, so that the policy within the state is not settled.

Most of the arid states have prescribed certain rules for filing claims to water, and for constructing works with "reasonable diligence," etc., but so far no penalties have attached to failure to file claims, and

<sup>1</sup> *Howell vs. Johnston*, 89 *Federal Reporter*, 556.

<sup>2</sup> *Lamson vs. Vailes*, 61 *Pacific Reporter*, 231.

"reasonable diligence" is open to such divergent constructions that these laws have been little but an invitation to litigation.

In all the arid states, except Nebraska and Wyoming, the whole administration of the water supply has been left to the courts. There is no simple process by which an irrigator can prove up his claim to water as he can his claim to government land, but he must go into the courts, hire an attorney, secure witnesses to testify to his acts, and go through all the forms of a suit at law. The decrees rendered in these cases are subject to review, and cover only the claims of the parties to the suits. Parties not included in the adjudications can at any time open up the question, and as the decrees formerly rendered only define the rights of the parties to them as against each other, every appropriator on a stream must appear every time a case comes up on his stream and defend his rights, or rights subsequent to his may be given a preference over his.

The holding of different theories in regard to appropriations, and as to filing claims, and as to what constitutes reasonable diligence, and the practice of leaving the whole matter of water rights to the courts, result in unending litigation. It is impossible to give statistics in regard to the extent of this litigation or as to its cost, as the records of the lower courts in the several states are not published, and the largest part of the expense of litigation is not a matter of record, except on the books of the lawyers and of the irrigators. The following, taken from a petition sent to the Department of Agriculture by citizens of California, will give some idea of the conditions in that state:

We can offer, we presume, examples of every form of evil which can be found in Anglo-Saxon dealings with water in arid and semi-arid districts. Great sums have been lost in irrigation enterprises. Still greater sums are endangered. Water titles are uncertain. The litigation is appalling.

This petition was signed by such men as President Jordan, of Stanford University, and E. J. Wickson, acting director of the California Experiment Station.

The cost of litigation of water rights in Colorado has been variously estimated at from one million dollars to ten million dollars. That state has been described as a place where "every irrigator must retain an attorney and buy a shotgun to protect his right." The following, taken from the *Rocky Mountain News* of July 7, 1900, shows something of the condition in Colorado:

There is impending in the Arkansas valley, and probably in other parts of the state, a great clash among the owners of ditch rights because the practice of district judges in adjudication of water rights is not uniform. It is the custom, it is said, for district judges in all the counties except Pueblo and Las Animas, and the other counties constituting the two districts with them, to reopen the matter of adjudications on the slightest provocation. Not infrequently owners of adjudicated priorities of a fixed date find proceedings entered upon and carried through, the result of which is that their priorities are virtually pushed into a later year by the insertion ahead of them of rights claimed by ditch owners who were not parties to the full adjudication. . . .

The result of the practice in a greater part of the state is to keep the water priorities always an open book, and no settlement possible for all time, with the result that a deal of trouble is coming, according to the view of all water-right attorneys.

The writer recently asked a Colorado water lawyer whether, in his opinion, litigation over water rights was decreasing. He answered that it was not, but was increasing if anything; and his practice is in a district where the rights were supposedly *finally* adjudicated seventeen years ago.

The following is the statement of expenses of a Montana ditch company for the years 1891 to 1895. The amounts given in the original statement have been reduced to percentages of the whole :

	Per cent.
Services of attorneys - - - -	60.1
Court fees - - - - -	19.0
Canal maintenance and repairs - -	14.0
Miscellaneous expenses - - - -	6.9

The statement shows this company paid four times as much for legal expenses as it did for maintaining and operating its canal. And such a state of things is not exceptional.

In Wyoming and Nebraska water titles are not settled in the courts, but by boards created for the purpose of distributing the water supply of those states. Under this system the board gives notice that at a certain time it will hear testimony as to the use of water from a certain stream. When the testimony is in the board decides as to the date of each appropriation and the quantity of water to which each claimant is entitled, and issues a certificate to each irrigator stating the number of his priority and the quantity of water to which he is entitled. Persons wishing to appropriate water from a stream subsequent to the adjudication by the board of control must apply to the president of

the board for permission to do so, and if there is unappropriated water in the stream, he is given permission to build a ditch and use the water, and upon submitting proof of having done this, he is given a certificate showing just what his rights are.

This law has been in force in Wyoming for ten years, and during that time but two water-right suits have reached the supreme court. But the supreme court of the state has recently overturned the whole system by deciding that no one is obliged to submit his claims to the board of control, and in case anyone does not do so, he may enforce his rights in the courts. This places Wyoming rights in the same position as those in the other states where the courts have the control of the whole matter of dividing water among the various claimants.<sup>1</sup>

With water titles in such hopeless confusion, and with no hope of any permanent settlement, neither capitalists nor farmers can be expected to flock to the arid West and reclaim the desert.

As to remedies for the prevailing evils: The Wyoming law has worked to the satisfaction of all concerned for ten years, and during that time there has been no more litigation than is necessarily incident to any business. The defect in the law, as pointed out by the state supreme court in the decision above referred to, is that the board of control cannot compel water users to submit their claims to it for adjudication. But in the same decision the court intimates that it would be competent for the legislature to pass a law making the penalty for failure to submit claims to the board the forfeiture of all rights. The Wyoming system, with this addition, provides for an inexpensive proceeding before an expert board, paid by the state, and after a limited time for review its decision is final, and the irrigator is given a certificate showing just what his rights are, and these rights are as much a matter of record as is his title to land, and are no more liable to attack.

In many of the arid states the adoption of such a system would necessitate changes in their constitutions, but the benefits to be derived from its adoption would be well worth the trouble of making constitutional amendments.

Rights on interstate streams might be adjusted by an interstate board constituted like these state boards, or the dates and amounts of appropriations might be determined by the board in the state in which they were made, and be administered by a national or interstate

<sup>1</sup> *Farm Investment Co. vs. Carpenter*, 61 *Pacific Reporter*, 258.

official. There is no question but that justice demands that state lines be entirely disregarded on such streams. There is no more reason that a settler just above a state line should be allowed to rob his neighbor just below the line of his water than that he should be allowed to take his horses or his farm implements. With an inexpensive and final method of settling titles to water, capital and labor would doubtless find some mutually advantageous mode of combination, and the vast resources of the arid West would be developed.

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## NOTES.

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### THE UNREVEALED PROFITS OF PROMOTERS.

A DECISION of peculiar interest at the present time, in view of the extraordinary activity of promoters of corporate enterprises during the last two years, has just been rendered by the Supreme Court of Massachusetts in the case of the East Tennessee Land Company. The principle involved is both far-reaching and salutary. In substance it holds that promoters of a joint stock company stand in a fiduciary relation to future shareholders for all unrevealed profits incident to the formation of the company. The facts in the case were somewhat as follows. Some five individuals in Tennessee united under the name of the Phoenix Land Company, for the purpose of securing options upon some three hundred thousand acres of land in that state. They, providing the local information as their share in the enterprise, thereafter induced some prominent citizens of Boston and vicinity styling themselves The Syndicate of Ten to contribute capital, amounting to some \$15,000 or more, sufficient to pay organization expenses and to secure the necessary options upon the land. This land was estimated to cost about \$900,000 including \$100,000 for expenses; and was then to be transferred to a corporation, the East Tennessee Land Company, the same to be capitalized at 1.5 million dollars. The difference between these sums, after repayment of costs of organization, amounting to some \$700,000 was to be shared equally as profit between the members of the Phoenix Land Company in Tennessee and the Syndicate of Ten in Massachusetts.

In pursuance of this plan, as soon as one third of the options had been secured, and before the Land Company was publicly launched, the two promoting concerns issued to themselves their estimated profits of \$700,000 in paid-up stock of the corporation. Nominally this \$700,000 worth of stock was paid over in return for land options, which as it appeared, had in reality cost but \$6000. The Company became insolvent; and this decision, is now rendered as a result of suit to recover, brought on behalf of the shareholders by the receiver. Not only does it hold the promoters liable for fraud in withholding



from the public the amount of the profits voted to themselves as directors; but also for the issuance of fraudulent and misleading prospectuses, inviting subscriptions to the stock on the basis of the statement that "the capital stock of this Company represents actual value without inflation, but does not approximate the entire value of the properties on which it is based."

It is of interest to note the parallel in a recent adjudication by the House of Lords upon a similar case in England. This also marks the victory of the shareholders of a bankrupt joint-stock company, after prolonged litigation extending over a number of years, in forcing the disgorgement of secret profits made by the promoter-directors in the flotation of the enterprise. The facts in the case of "Olympia Limited" are as follows. In 1893, it became practically certain that a spectacular resort in Kensington, Olympia Hall, for a long time identified by the Kiralfy Brothers with their well-known "Venice in London," must be sold under the hammer. One Montagu Gluckstein, Esq. and three or four others, proceeded at once to acquire rights from the debenture holders, as well as to buy up the mortgages upon the property. These they obtained at a considerable discount from their par value; a mortgage for £10,000, for example, being purchased for £500. Having done this, they then associated themselves into what they called "The Freehold Syndicate," having for its object to bid in the property when sold under foreclosure. This they did, Olympia being purchased for £140,000. This of course was to repay themselves as debenture holders and mortgages to their par value. Note a large profit, number one. On the same day, "The Olympia Company Limited" had its birth, Gluckstein *et al*s Directors, which proceeded to repurchase the property from the Freehold Syndicate for the benefit of future stockholders, for the round sum of £180,000. Glowing prospectuses issued forthwith to the dear public, produced the usual results. Subscriptions to the stock at £5 a share poured in, and everything went swimmingly in a sea of watered stock. The inevitable followed; and the depleted shareholders brought suit to recover the unrevealed profits made by the promoters.

It appears that these promoters had complied with certain provisions of the English Companies Acts, requiring the cost price of the property to be made known in the prospectus. They stated, it seems, the *apparent* original purchase price, £140,000; and the fact that they as promoters had reserved to themselves the difference between this figure

and the capitalization of £180,000. What however they rigidly concealed from the stockholders was the fact that they had already made a prior profit, having really acquired Olympia from themselves on the first turn-over before the foreclosure sale, for about £20,000 less than the nominal purchase price of £140,000. To force the promoter-directors to disgorge this extra unrevealed profit of £20,000 was the purpose of the action, fully upheld as we have seen by the highest court of adjudication in England. It was claimed by Gluckstein and his pals, that there had been in fact an adequate revelation of the facts to the directors of the company. But in the words of the learned judge, Lord Macnaghten, "‘Disclosure’ is not the most appropriate word to use when a person who plays many parts, announces to himself in one character what he has done and is doing in another." The rôle of Pooh Bah may appear to advantage upon the comic opera stage, but when in the stock pit it ill becomes a man of wealth or social standing.

Both these cases of Olympia Limited and of the East Tennessee Land Company are of supreme importance in the present interval of quietude subsequent upon the era of furious speculation and of joint-stock company promotion of the last two years. They are indicative of reforms especially in the line of publicity which investors and the general public are bound to demand as their right. For over three years a special committee of the English House of Lords has had under consideration a reform of the Companies Acts intended to hold both promoters and directors to a strict accountability for their official acts. Unfortunately the House of Lords is largely composed either of those honorable gentlemen of large landed estate, limited income and high social position, whose names look well upon a printed directorate; or else of lawyers whose professional gains are largely augmented by the flotation and "winding-up" of such concerns. As a result the House of Lords after several years of consideration has piously excluded from its reform program all pains and penalties against directors and promoters, as liable to discourage gentlemen from serving in such useful capacities, despite the urgent protests of all the leading financial press.

Fortunately in the United States we are not confronted with this particular evil. It is not the embryonic corporation which debauches our legislatures. But the fraudulent promoter, like the poor, is nevertheless ever with us. And a few more healthy adjudications like these will do much to abate them as a financial nuisance in the community.

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## THE TAYLOR WHITE PROCESS FOR TOOL STEEL.

THE Bethlehem Steel Company on July 31 gave to invited guests a demonstration of the new Taylor-White process for tool steel, a development in metallurgy of scarcely less interest to the economist than to engineers. This process—the details of which are kept secret—was the discovery of Mr. F. W. Taylor and Mr. Maunsel White, engineers connected with the Bethlehem Steel Company. The records made by use of this process seem almost incredible. The cutting speed has been raised from 8 feet 11 inches to 25 feet 3 inches, the weight of metal removed in the hour from 31.18 pounds to 137.3 pounds. Comparative tests were made in presence of the guests. In one instance the new steel worked without damage for 15 minutes on metal which destroyed a similar tool made of Mushet steel in 22 seconds. Exhibition was given of a tool working until its point was heated to a visible red, yet without damage to the tool. On the same work an ordinary tool was destroyed in six seconds. Such achievements need no further comment from the technical point of view.

Economically, it seems that the owners of the Taylor-White process are justified in applying to it the much overworked term “revolutionary.” So widespread is the application of machine tools that every industry may feel the effect of this invention. Already for some time English engineers have regretfully acknowledged the technical superiority of American machine shops. Competition seems likely to succeed most along this line, and the new discovery is at once evidence of American progressiveness and earnest of increased competitive powers.

An interesting side light is thrown on modern methods of industry by the action of the Bethlehem Steel Company in regard to this discovery. No attempt was made to exploit the invention until it had been used for nearly two years in the shops of the company. During all this time no account of its successful working appeared in the technical press although it was known that the new process was in use. The company states that over 200 tons of steel forgings have been cut up in turnings and over \$100,000 spent in labor and material during this experimental stage, but not until its success was established beyond a doubt was it announced to the public or efforts made to realize on the investment. The company now proposes to sell the right to apply the process to machine shops, the purchaser to use it only on his own tools, not producing them for the market; and further

binding himself to keep the process secret. It will be of interest to see how long such a course will be effective in maintaining the secret, and whether imitators will succeed in competing with the inventors.

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### DEFEAT OF THE BINDING-TWINE TRUST IN KANSAS.

THE People's Party of Kansas, in August, adopted a platform which says, among other things, that "we point with gratification to the erection of a plant for the manufacture of binding-twine by the state, which has checked the extortions of one monopoly by compelling it to reduce its prices, and has already saved thousands of dollars to the farmers of Kansas."

Hostilities in the Philippines reduced the supply of hemp almost simultaneously with the formation of the trust in this country. The result was a very high price at harvest time for the twine, exceeding by nearly 90 per cent. that paid at many times in the last decade. In Kansas, however, a plant at the State Penitentiary has succeeded in reducing trust prices nearly 40 per cent., the cost of the raw material preventing further reductions.

In carrying out this policy the state authorities found their chief obstacle in the fear that trust agents would buy up the output and sell it with other twine. To overcome this, a simple expedient was adopted, and it succeeded. Every farmer desiring twine sent an order to the factory, stating how much he would need, agreeing to pay transportation charges, and certifying that the amount ordered was for his personal use. As the season advanced, a more open policy was pursued, which finally put the product on sale with the regular dealers.

The trust at last met the state prices in Kansas, and only the crop failure in the Northwest prevented a similar contest there. A surplus remains at the factory. It seems probable that next harvest will bring a repetition of this year's experience.

J. EDW. TUTHILL.

## BOOK REVIEWS.

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*Wages in the United Kingdom in the Nineteenth Century.* By ARTHUR L. BOWLEY. Cambridge: at the University Press; New York: The Macmillan Company, 1900. 8vo, pp. vi + 148. \$2.

THIS work contains what the author modestly calls "notes," prepared for lectures delivered in 1898, but "extended and entirely recast" before publication. Mr. Bowley has been for some years engaged in studying the available data for the statistics of wages in the United Kingdom, and the book now presented to the public contains some matter previously published in the *Journal of the Royal Statistical Society*. The results here given by no means exhaust all the materials that exist, but the author trusts that the book will give a useful presentation of preliminary results, invoke helpful criticism, and "illustrate the various questions that arise in the study of wages." Mr. Bowley does not attempt to write "the general history of wages" during the present century; but passes over questions of cause and effect, and addresses himself to the purely statistical object of ascertaining "the total amounts and the averages of wages" from decade to decade.

The first chapter deals chiefly with methods of investigation. Here the author distinguishes the "statical" from the "kinetic" method. The former method, which is more commonly followed, "consists in making comprehensive estimates for given years," thus obtaining averages of wages and the distribution of workers according to the rates of remuneration received. Mr. Bowley follows almost exclusively the second, or "kinetic," method, which investigates "not wages themselves, but their rates of change." This has the advantage of enabling the investigator to use sequences of figures obtained by different observers, and to combine these in such a manner as to show average rates of change; whereas "statical" wage tables prepared by various authorities, probably by different methods, would not fairly admit of combination and comparison. A further advantage of the "kinetic" method is that it diminishes, or even eliminates, errors that arise from

the personal bias of the observer or from failure to take account of the various deductions or additions which affect so materially the actual remuneration of the laborer.

The second chapter is devoted to a consideration of the chief sources of information and the nature of the materials available. There exists "a great abundance of official material" in the form of parliamentary reports and papers dealing with the condition of the working classes. In order to examine this completely "it would be necessary to overhaul some 5000 volumes, each of 500 to 1000 pages." Then there are scattered data in scientific journals, fugitive pamphlets, and the publications of trade unions and other organizations. Finally we have the important works of Eden, Young, Baines, Porter, McCulloch, Brassey, Baxter, Levi, and Giffen. In the quest for information, the author states, "the general aim to keep in view is the discovery of sequences of figures, the most valuable being those compiled by a single authority from similar records for a series of years."

The next chapter contains a valuable discussion of the meaning and use of the term "average wage." Despite diversities in the capacity and occupation of laborers, there are causes which, at the same time and place, bring it about that "the wages for equal effort of men of the same capacity are equal to one another" (p. 18). Since this is so, it is "useful to watch the change of the rate of wages paid for a certain degree of skill, even though the number of persons paid at this wage may be but a very small proportion of the total number doing similar work." Economic friction undoubtedly prevents the realization of complete uniformity of wages paid "for equal degrees of skill." Yet experience shows that the movement of laborers from one occupation to another maintains such uniformity in the long run. More than this, we find that "the distribution of numbers in different degrees of ability is to some extent invariable," as Mr. Galton has shown; so that, "if we know the distribution of wages for different degrees of skill at any one date, we may reasonably expect that the distribution at any other date will be similar." Of course, changes in education and other causes that affect skill may, over a long period of time, produce a somewhat different distribution (pp. 20, 21). Mr. Bowley discusses interestingly the difference between the average wage, the median wage, and the wage most frequently paid; and suggests important fields for investigation. In this

work, however, he is compelled to confine himself to a study of average wages.

Proceeding to the study of wages in different occupations, Mr. Bowley discusses first the course of agricultural wages. Prior to 1840 the changes in economic conditions were so many and so rapid that agricultural wages fluctuated greatly, and all the statistics for the time "must be handled with great care" (p. 31). Yet averages computed by different writers agree fairly well (p. 34). Mr. Bowley's results show, for the period subsequent to 1840, an increase of wages amounting to 33 per cent. (p. 130). This was secured, however, prior to 1878. A special study of agricultural wages in Sussex illustrates excellently the difficulty of the problem and the care that must be exercised in such investigation. The study of wages in Ireland and Scotland develops special difficulties; but, for the latter country, averages are secured for three classes of agricultural laborers. These figures show a constant increase of wages (p. 57).

We may pass over a chapter devoted to wages in two special occupations, and come to Mr. Bowley's examination of the general estimates formed by various writers who have studied wages in the United Kingdom. The earliest estimate was made by Colquhoun, for the year 1803; and the latest are those of Baxter, Levi, and Giffen. From all of these the author constructs a table, according to the "statical" method, which he presents as "purely tentative." This shows an increase of weekly wages from 13s. 6d., in 1795, to 21s. 4d., in 1867, and to 25s. 6d., in 1897. These results, while doubtful, may be compared with those finally reached by Mr. Bowley.

The author now proceeds to present data for the seven distinct trades which, with agriculture, supply the materials for his computations. In the printers' trade the records are complete and satisfactory (p. 76). Statistics of seamen's wages are complete for the period after 1848 (p. 77). In the building trades the figures are less complete, and a considerable amount of estimating is necessary (pp. 88, 92). The wages paid to coal miners present many difficulties (pp. 96-100). The author's method is to ascertain the average daily wage and to multiply this by "the number of days that are considered at the time and place to constitute full work" for the normal week (p. 101). In this way weekly rates are calculated; but even then the results are sometimes "patchwork" (p. 107). In the cotton and woollen industries satisfactory data are hard to secure prior to the general introduction

of the power loom at about 1830 (p. 113). Even after that date considerable calculation and interpolation are necessary (p. 118). In the iron trade statistics of wages are hard to gather because such great changes have taken place in the character and subdivision of the separate branches of employment (p. 120). Mr. Bowley considers it sufficient to base his statistics upon these leading industries, because the minor trades are often so unimportant that their result would not affect the general average materially, and because the shifting of laborers from one employment to another produces a general uniformity of wages (p. 124).

In the eight leading industries considered, Mr. Bowley finds an increase of from 50 to 100 per cent. between 1780 and 1816, an increase, however, which was often counterbalanced by an increased cost of living (p. 125). From 1820 to 1840, despite fluctuations in the various trades, tentative results show a slight decline (p. 126). The general average of wages from 1840 to 1891 is shown in the following table by a series of index numbers, in which the wages of agricultural laborers for 1891 are taken as 100 (pp. 130, 132).

1840 = 61	1877 = 94
1850 = 61	1880 = 89
1860 = 73	1883 = 92
1866 = 81	1886 = 90
1870 = 83	1891 = 100
1874 = 97	

If agriculture is excluded from the list, the seven other industries show practically the same results that are presented in the table just given. All of the trades show a marked increase of wages since 1840, and all except woollens, iron, and agriculture, show at least a partial recovery of wages after the fall which took place between 1874 and 1880. Since Mr. Bowley takes express pains to present his calculations as tentative, and explains in each case the difficulty and uncertainty which attend his work, criticism of the results is disarmed. We may welcome his book as a valuable contribution to the wage statistics of the United Kingdom, and express the hope that he may be enabled to carry out his intention of making his investigations more complete and exhaustive.

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*Rural Wealth and Welfare: Economic Principles Illustrated and Applied in Farm Life.* By GEORGE T. FAIRCHILD, LL.D. (The Rural Science Series, edited by L. H. BAILEY). New York: The Macmillan Company, 1900. 12mo, pp. xiv+381.

*America's Working People.* By CHARLES B. SPAHR. New York: Longmans, Green, and Company, 1900. 12mo, pp. viii+261.

THE feeling of disappointment induced by a reading of *Rural Wealth and Welfare* may be due in part to too great expectations, growing out of the length of time which elapsed between the first announcement of the book and its actual appearance; but surely it is not unreasonable to expect a work with such a title to contain contributions to the literature of subjects of practical importance to farmers, such as agricultural depressions, farm labor, rotation and diversification of crops, reclamation of arid lands by irrigation, and intensive culture in general. Instead, we find an elementary treatise on general economics, with the special problems of the farm treated only incidentally at best, and with whole chapters devoid of anything bearing directly upon agriculture or upon rural welfare. Several chapters are devoted to exchange, currency, credit, and banking, but only paragraphs or sentences to such subjects as good roads, bonanza farms, agricultural insurance, and the like. And there is nothing original or strikingly well said about the economics of the volume, to reconcile the student of agriculture to the waste of time involved in reading it. The author has fallen hopelessly into the habit of stating his opinions and conclusions dogmatically, without any adequate basis of fact, and even without indicating his own mental processes. This habit is perhaps explained, though it is by no means excused, by the attempt to cover too much ground in one small volume.

The treatment of the law of diminishing returns as applied to agriculture, the only agricultural subject to which more than passing mention is accorded, is especially unsatisfactory, if not misleading. The important qualification "beyond a certain point" is ignored, and in its place appear the words "under usual conditions." ("In the cultivation of land an increased amount of effort under usual conditions fails to give a correspondingly increased amount of produce.") It may be noted in passing that this statement of the law leaves the application of capital to the land out of account. And the proof of the law is found "in the disposition of farmers to buy more land instead

of to increase labor upon a limited space possessed"—as if the intuition of farmers could be trusted to solve unerringly the most difficult unsettled problems in economics. The simple fact of the matter is that no one can tell whether American agriculture in general has or has not reached that certain point beyond which the law of diminishing returns begins to operate; but a recent investigation of the United States Department of Agriculture has shown that the point of diminishing returns has not been reached in cotton culture,<sup>1</sup> and there is good reason to believe that the same thing is true of other important crops, at least in some sections of the country. Whether the actual tendency at the present time is in the direction of larger farms is another very doubtful point which is taken for granted without proof. Dr. Fairchild's ill-considered teaching on this subject of diminishing returns ought not to be permitted to reach the public for which it is intended without protest, for it is a direct encouragement to shiftless farming.

The book contains some interesting suggestions about possible methods of co-operation in agriculture (in the widest sense of the word co-operation), but these might have been made much more interesting and valuable by telling something about actual experiments along the lines suggested. Almost the only concrete and tangible facts in the book are those exhibited in fourteen charts of ingenious but complicated graphic statistics. These are devoted mainly to agricultural products, but they are not so related to the main argument as to be really illustrative. By a more careful revision of his proofs the author might have avoided such misstatements as that in which tea is put in the free list.

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DR. SPAHR'S book is much more of a contribution to our knowledge of rural welfare than is Dr. Fairchild's. The author considers the rural districts more typical of America than the cities, not only because they contain more people and a smaller proportion of foreigners, but also because "it is here that the immigrants are most thoroughly assimilated, and social institutions most completely dominated by the American spirit." "America," he says, "begins with the rural districts." He therefore apologizes for devoting half his chapters

<sup>1</sup>WATKINS, *The Cost of Cotton Production* (Division of Statistics, Miscellaneous Series, Bulletin No. 16), pp. 25-29, 64; GEORGE K. HOLMES, "Agricultural Production and Prices," *Yearbook of the Department of Agriculture*, 1897, pp. 597-599.

to manufacturing and mining towns and to the trades-union movement in Chicago. His method of investigation reminds the reader of Mr. Wyckoff's "experiment in reality;" for though he was not in disguise, he mingled freely with workingmen as well as with employers at every place he visited, and so was able to check the statements of both sides, and often to reconcile them or get them modified at the original sources when they disagreed. In some cases official publications were resorted to as a further test of accuracy, although Dr. Spahr always distrusts printed statistics as compared with actual observation. He found both employers and employed willing to answer his questions, but it was from the workingmen that he acquired new points of view and the facts which are not found in the newspapers. His travels extended from New England to Alabama and Utah, and included the coal and iron regions of Pennsylvania, some of the new factory towns of North Carolina and Georgia, the backwoods of Arkansas, and the farming districts of Minnesota. The result is a collection of sketches a shade less impressionistic than "The Workers," but forming on the whole a somewhat safer basis from which to generalize. Yet the contents of ten chapters describing such diverse conditions cannot well be summarized in a brief review, and it must suffice to call attention to two or three observations only.

Dr. Spahr was impressed more than once with the lowering of farm wages during recent years—much more so, in all probability, than he would have been if his inquiries had been made during the present summer. An Arkansas farmer testified that while he formerly paid \$18 or \$20 a month, he could now get a good man for \$10; and on the cotton plantations of the Black Belt wages had fallen in a few years from seventy-five cents a day to thirty or forty cents with rations costing about five cents a day—three and a half pounds of bacon and a quarter of a peck of meal each week. Moreover, these day wages stopped when work was stopped by bad weather, and wages by the month were only about twenty times thirty or forty cents. Even for a white man \$8 a month with board was considered a fair wage in northern Georgia: but board in the case of white hands is considered worth \$5 a month. Rural wages, however, as the author truly remarks, are hardly comparable with city wages; he estimates that \$400 in Jonesboro, Ark., will purchase more comfort than \$800 in an eastern city, and denies that the condition of labor generally has improved during the century as much as wages are reported to have risen,

because a century ago nearly all labor was rural. He found that everywhere those who were migrating to the towns were those who were too poor to be able to live in the country, or those too rich to be willing to live there; making the cities centers of both wealth and poverty, and leaving the farming districts the strongholds of the great middle classes.

It was on the northern farm that Dr. Spahr found the conditions most hopeful — not because of the 50 per cent. dividends paid by the co-operative dairies of Minnesota, nor even mainly because he believed the farm of moderate size to have certain economic advantages which would enable it to compete successfully with and even supersede the bonanza farm, but chiefly because he found the independent northern farm, worked for the most part by the owner and his family, giving men and women "the training in self-reliance and self-respect upon which the development of democracy rests."

MAX WEST.

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*Das Aufsteigen des Arbeiterstandes in England. Ein Beitrag zur sozialen Geschichte der Gegenwart.* By HANS VON NOSTITZ. Jena: Gustav Fischer, 1900. 8vo, pp. xxiii + 808.

IN the present work Mr. von Nostitz endeavors to bring together the various factors which have entered into the elevation of the laboring classes in England. Beginning with an historical account of labor and industrial conditions and the growing evils following the introduction of machinery and the development of manufactures in the early part of the nineteenth century, under the *laissez faire* policy, the author presents in turn each of the various influences which have tended to overcome these evils and have raised the English workingman to the high plane on which he stands today. As an historian he has taken up the various social movements individually and collectively and has traced them from their inception, through their various vicissitudes to the present time. As an economist he has sought to determine the causes for the conditions presented in the historical account, to measure the relative influence which each factor exerted in the upbuilding of the working classes, and to show the present condition and tendencies of the various phases of the social question in England.

The task of Mr. von Nostitz was an enormous one and gives evidence of earnest study and vast research. During a six months'

sojourn in England he visited many persons and institutions and made a careful selection of original and other sources. That he has successfully accomplished his task is evident to anyone who examines this volume. In presenting the labor conditions at the present time Mr. von Nostitz has done, in a measure, for the Englishman what Mr. Levasseur has done for the American in *l'Ouvrier Americain*, although the work of the former is primarily historical while that of the latter is statistical.

The present work consists of two parts and an introduction. The introduction contains a review of industrial, social, and political tendencies at the beginning of the nineteenth century, the enormous growth in manufactures with the resulting increase of the urban population, the accumulation of capital in commercial, manufacturing, and agricultural enterprises, and the social consequences as manifested in the increased public wealth, the creation of a plutocracy, the misery of the proletariat and the growing dissatisfaction of the working people. Then follows a review of social and economic developments since the middle of the nineteenth century and the influence exerted by public spirited men, the Christian socialist, etc., in averting the great revolution which seemed to threaten the English nation.

In the first part the author gives an account of the development of constitutional government in England, of elementary and higher education, and of the movements for popular education, such as university extension work, university settlements, the Workingmen's College in London, etc.

In the second part he considers those factors which have more directly affected the working classes, chapters being devoted respectively to trade unions, friendly societies, protective legislation, wages, hours of labor, labor disputes, the housing of the working people, etc. Each subject is treated historically and in its economic and social aspects.

The three principal agencies which, according to Mr. von Nostitz, are responsible for the progress of the working classes of England are association, the work and influence of the higher classes, and the public authority. Through the agency of trade unions, friendly societies, and co-operative associations the English workingman has established a system of self-government which enables him to pursue certain aims and to accomplish results which have not only improved his own condition but have wrought changes which have exerted an important

influence upon the life of the entire nation. Association keeps the individual in wholesome restraint and gives him a new intellectual and moral aspect of life, for it teaches him to feel and act in common with his associates and to work for and make sacrifices for the common interests of all. The extension and development of trade unionism in England is simply extraordinary. The trade unions must therefore, according to Mr. von Nostitz, take the front rank as a factor in the progress of the working people, but he thinks that it would be an exaggeration to regard them as the sole factor or as one which immeasurably exceeds all others.

In all the movements for the improvement of the condition of the working people the aid of the upper classes has a prominent part. Although the great development of association may have been possible without the aid of the higher classes, the progress would have been slower and the results achieved, less favorable. Numerous friendly societies and co-operative associations were founded and are aided by the higher classes, and many from their ranks co-operate in the work of the trade unions. In considering the movements for better housing, for the solution of the question of the unemployed, for improved educational facilities, etc., the efforts and sacrifices of the higher classes must not be overlooked.

As the political authority has thus far been exercised by members of the upper classes, and as they have enacted and enforced the laws, they must be credited with a large part of the progress which has resulted from the third great factor in the development of the working classes.

The author draws three important conclusions from the elevation of the English working people during the nineteenth century. The first is that it refutes the theory of Marx, that the submerged sink lower and that the poor must necessarily become poorer, for it is shown that, on the contrary, the progress was greatest where the economic, social, and intellectual conditions were worst, namely in the textile and mining industries. The second conclusion is that the hope and the safety of the future lies in the fact here demonstrated that the power of progress, no matter how weak in the beginning, becomes constantly stronger from time to time; that no object is so insignificant, no sphere so small, no locality so distant, but that honest, striving, and an earnest effort has its part in the great and common work of mankind; that the most modest life may find riches and comfort

in the fact that it need never be valueless; and that each can serve in his own sphere to create and accomplish something for the better. The third conclusion is that the economic, while it has aided, has not permanently dominated the social development, and that although the elevation of the condition of the English workingmen was not accomplished without a struggle, it was not due exclusively or even preponderatingly to their own efforts.

The book contains bibliographical notes and a very comprehensive list of references.

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*The Trust Problem.* By JEREMIAH WHIPPLE JENKS, PH.D. New York: McClure, Phillips & Co., 1900. 8vo, pp. xix + 281.

PROFESSOR JENKS'S utterances upon the subject discussed in this volume must be considered authoritative. He has long been known as a thorough and painstaking student of industrial combinations, and during the past year has had unsurpassed opportunities for gathering material in the course of his work as expert agent of the Industrial Commission. This book "is not intended for the student of economic theory," but presents, in a lucid popular way, the main facts concerning the status of "trusts" in the United States, for general reference. A more complete discussion is promised.

*The Trust Problem* formally consists of eleven chapters and an appendix, but falls logically into two parts—one dealing with general statements and tendencies, the other with the actual working and effects of particular organizations. Of the theoretical portions of the work not much need be said. They contain no explanations of the growth of trusts and no analyses of the phenomena of monopoly price that are not already familiar. Not much more attention is demanded by the sections devoted to concrete investigation. They contain a series of brief monographs on the prices of certain trust-made products, and give valuable information, presented largely by the graphic method, in a clear and succinct fashion. Those of the sections which find a place as illustrations of the theoretical discussions often yield facts and figures not elsewhere available.

It is rather the general tone of the book and the judgments of the author that will arrest the student's attention, and at the same time will rouse the greatest doubt in his mind. Three things in this connection

seem of paramount importance—the author's attitude toward the trusts, his attitude toward their critics, and his suggestion of remedies for acknowledged evils. The casual reader will, perhaps, find it a matter of some difficulty to satisfy his mind on these points. One who examines Professor Jenks's checkered pages with more care will, however, conclude that he appears as a, perhaps unconscious, apologist for the trusts, although there are many expressions which seem to contradict this opinion. The author's indictment of competition is severe; his belief in the trust as an economizer of labor and capital apparently strong; his admiration of the "captain of industry" unbounded. Of the arguments regarding the corrupt influence exerted by many "trusts" upon legislatures and public officers he makes little account. In these respects the trusts, he says, are no worse than other business organizations; and, in any case, the evil could as well be met by supplying a higher grade of legislator. Here seems to be a flaw in the argument. After all, it is not the moral quality of the acts of the trust magnates that is in question, but the influence of those acts. If bribery has been greatly extended by capitalistic combinations, then they are dangerous in so far as they have increased the prevalence of this "custom," no matter whether they are ethically worse than individuals or not.

The proposal made by some to remove the present import duties from all trust-produced commodities is rejected by Professor Jenks. Such action he says would lead to one of two results: either international combinations of greatly increased power would be formed, or the industry in question would go to the wall. In the latter case, there are others who would suffer sooner and more heavily than the trust, inasmuch as few industries are entirely monopolized, there being usually a few independent producers outside the combination. These latter would bear the stress of the competition with foreign-made goods, and would succumb to it much more readily than a compact body of producers or trust. The difficulty with Professor Jenks's argument at this point seems to be that it neglects the fundamental position of those who advocate a change in the tariff system as a means of controlling the combinations. A change in the tariff could do no more than affect the price of the article in question. No one has contended that a change in tariff-rates would necessarily destroy industrial combinations. Evidently at any given moment the price of a given article A is higher than formerly or it is not. If the trust has not raised, but



has lowered prices, the reduction of the tariff on A would be advocated by none. If on the other hand the price of A has materially risen since the new form of organization came into existence, might not a reduction in the tariff equivalent to the rise in the price of the article tend to restore the old price? It is no rebuttal to say that the stress of foreign competition would in such a case fall, not on the trust, but on a small body of independent competitors, for, as Professor Jenks conclusively shows, it is the trust itself that is the price-making agent. Moreover, if the independent competitors have borne the pressure of the trust's competition without ruin they can endure that of the possible foreign rival. Nor is it more cogent to say that a reduction of tariff rates will merely force an international combination. If such a result can so lightly be produced it would probably come in any case. Indeed, Professor Jenks has himself elsewhere laid stress upon the growing difficulty of combination arising from increased extent.

Without attempting a more lengthy discussion of the subject, it may briefly be said that the currently proposed remedies for monopolistic tendencies are for the most part condemned by Professor Jenks. On the other hand, all that he substitutes for popular remedies is the somewhat vague suggestion of more thorough "social control." In order to attain this control he has to offer only the familiar "publicity" and "responsibility for the acts of corporations."

*The Trust Problem* contains a number of inconsistencies. Thus, for instance, it is laid down at the outset that competitive prices are high prices. Much stress is laid on the possible reductions in price under the trust régime. Yet, in the practical study of actual prices, it turns out that, in almost every instance cited, the trust prices are higher than those which preceded them. The book also contains some actual errors, although these do not seem to be numerous. As an example, the reader may be referred to the chapter on Legislation (pp. 218, 219), where there seems to be much confusion between the common-law doctrines as to restraint of trade and those in regard to monopolies.

The student of industrial history will probably lay down Professor Jenks's book—interesting and instructive as it is—with an intensified feeling that, after all, no "trust problem" really exists. As a phase of the evolution of modern industry the recent growth of the business unit is of great interest. As a chapter in the socialism *vs.* individualism controversy the suffering caused by this growth is of deep moment.

As a study in the failures of republican government the system of discriminating legislation and special favors to corporations will attract attention. When the campaign banners have been folded and the newspaper drudges have ceased to print their deadly stuff on corporations, trusts, and the tariff, the trust problem itself will turn out to be no problem at all, except so far as it constitutes a part of the larger discussion on the limits of state-activity. As such it will be better treated on different and more general lines.

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H. PARKER WILLIS.

*Railway Control by Commissions.* By FRANK HENDRICK. (Questions of the Day Series.) New York: G. P. Putnam's Sons. 12mo, pp. 161.

THE magnitude of the transportation enterprise and its interrelations with modern industrial development are every day being brought into clearer relief. At the same time the question of regulation, in the public interest, is also engaging more attention. The recognition of the quasi-public functions of modern railroads has stressed the doctrines of the common law which proclaimed that common carriers were not exempt from regulation in the common interest. Many phases of the modern regulative policy have not properly appreciated the difficulties of regulation; and so the history of regulative experiments is often a history of aspirations rather than of results.

Mr. Hendrick's work, while it gives a general summary of the regulative experience of European countries, is concerned with European experience only in so far as it throws light upon American experience and practice. The regulative policy of European countries has been so well covered by Hadley and by Sterne that it is difficult for another to follow. What Mr. Hendrick adds is in the nature of detail. His work shows care and discrimination in the selection of material.

There is a lack, however, of scientific tone in the work. It is a polemic in favor of the "advisory" type of commission. From the outset the reader is confronted by the author's persistent declaration that the "advisory" type is the one type that is by nature fitted for success. In enforcing this thesis it would seem that he at times forces the facts of European experience. For example, apparently misled by the word "commission," he traces a parallelism between the Italian

Commission, which recommended the lease of the Italian railways, and the Massachusetts Commission (p. 32). In treating of the regulative policy of Austria he lays stress on his favorite dictum that it is public opinion rather than legislative regulation which has been the most efficient regulator. He bases this, in part, on the fact that it was the private opinion of Dr. Hertzka which led to the adoption of the "zone" system (pp. 35-36, 40-41). But surely this system had the compelling force of law placed behind it before it went into operation. While Belgium does not present an advisory commission, the author's mind is easy because, by a stretch of logic, King Leopold is looked upon as occupying a position somewhat analogous to that of the advisory commission. And all is well. Notwithstanding the fact that a policy of government ownership and regulation is favored in Prussia, the existence of consultative councils is resolved by the author into a conclusion that the railroads are under an advisory commission (p. 61). When the English regulative policy is approached it is found that it does not fit the Procrustean bed. The author's thought with reference to England may be fairly summed up—"England has been unsuccessful in her regulative policy because she has not possessed an advisory commission" (cf. p. 81). Even in Switzerland where the nation has declared for state purchase, the author discovers that, through the instrumentality of the referendum, the railroads are in reality under an advisory commission (p. 160).

From the summary already given it will readily be understood that the "strong" commission of the United States is ruled out of court. An explicit statement to this effect has been given by the author in an earlier section (p. 51). The author takes Illinois as the type and considers that it has followed a drastic policy which has been disadvantageous. His statement that the commission law of 1873 was passed with a view to making regulation more drastic is open to question; for under this legislation a much more elastic policy was possible than under the older maximum rate law. Nor is Mr. Hendrick's sweeping condemnation thoroughly justified by facts. That the commission legislation of Illinois has not met all expectations is true. That it has bettered conditions is also true. Had attention also been turned to Iowa it would have been found that there also commission regulation by the "strong" type has not been as devoid of useful results as the author assumes. The cardinal antithesis made by the author is between the commission with legal power and the commission

which relies upon public opinion. The constant claim of the Massachusetts Commission that it relies upon public opinion, and upon public opinion alone, should not blind us to the fact that the compelling force of law is behind the provisions for regulation of construction and of capitalization and these are two of the most important provisions of the Massachusetts law. In this connection attention may be directed to the New York Commission which is based on the Massachusetts legislation, although it has less power. The New York Commission which, in its operation, has a still more ample opportunity to rely upon public opinion, has been much less successful.

The author suggests that the Interstate Commerce Commission should be deprived of its quasi-judicial powers, and reorganized as an advisory commission. Subordinate to this commission, and co-operating with it, would be state commissions also of the advisory type. He would permit pooling arrangements (p. 118).

The work throughout shows careful painstaking research. But it is vitiated by an apparently *a priori* assumption that the advisory commission is of necessity best. In dealing with the regulative policy he regards it as unduly simple. When speaking of the regulative policy of England he says that the railroads have attempted to settle grievances impelled to this by the working "out of their self interest and their public spirit" (p. 74). By implication he considers that this tendency is always in operation, thereby greatly lessening the difficulties of regulation. Elsewhere he tells us that the proper solvent is not to be found in coercive regulation; governments "should appeal to the higher sentiments of citizenship, civic pride, honor, love, achievement and patriotism" (p. 91). Such a regulative policy is too vague to be applicable. The work done by the Massachusetts Commission has been of high rank; and Mr. Hendrick's plea for it has the advantage of supplementing the monographs of Clark and of Dixon. But it is too much in the nature of a plea. The author does not make sufficient allowance for differences in environmental conditions. The conditions of the West and South differ entirely from those that confront the Massachusetts Commission. To have proved that the Massachusetts Commission has worked well does not prove that it is best for all sections of the country. This is the author's thesis; and this he has not proved.

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*A Municipal Program. Report of a Committee of the National Municipal League.* Adopted by the League, November 17, 1899, together with explanatory and other papers. New York : The Macmillan Company, 1900. 8vo, pp. xi+246.

THIS work consists of a draft of proposed constitutional amendments and a general municipal incorporation act, both broadly enough drawn to fit the circumstances of any of the states, and a discussion of the need for, and provisions of, these proposed changes by eight well-known students of municipal government ; namely, Messrs. John A. Fairlie, Horace E. Deming, Albert Shaw, Frank J. Goodnow, Leo. S. Rowe, Bird S. Coler, Charles Richardson and Delos F. Wilcox.

Nominally the volume is the outcome of the labors of this special committee for two full years ; it actually embodies the results of the work of the League since its organization six years ago. It offers the keenest analysis of the causes of our present municipal conditions and presents at the same time the most philosophic and systematic scheme for improving the organization and administration of our city government yet worked out. Doubtless the plan will be branded as *doctrinaire* and unworkable by those who have no knowledge of the subject, and, who suppose that they have an interest in maintaining the present bad conditions. The program is, in fact, in advance of the current bad traditions on city government, and therein lies its chief claim to consideration. All the propositions are not likely to be accepted at once, but, at least, we have now a definite and reasonable ideal towards which to work.

The program, recognizing democracy as a fact, attempts to develop its virtues and to curb its evil tendencies. The main attempt is to reduce to a minimum state legislative interference, and to give the cities the largest possible measure of home rule in regard to matters of purely local interest : while the city is to become the agent of the state in the administration of state functions within the municipal boundaries to a much greater extent than heretofore. When acting as the agent of the state, the city is to be subject to a strict administrative not legislative, control, to be exercised largely through state audit, inspection and partial publication of the accounts of the cities, which must be kept on a uniform basis. The city, under the proposed plan ceases to be a body of enumerated powers. It is allowed, under the constitution and general laws, to form its own charter, and, to enter

upon all kinds of activity necessary in its own opinion to satisfy the local needs of its inhabitants.

A sharp distinction is made between legislation and administration ; the first is in the charge of a single-chambered council, which has the residuum of governmental power, the other is solely dependent on the mayor. The council elected on a general ticket for six years—one third going out of office with the mayor, who serves but two years—is to elect (and may remove) the comptroller, whose term as well as that of all the appointees of the mayor is for an indefinite period. The mayor, as the responsible head of the administration, has the absolute power of appointing and removing all administrative officers except the comptroller, save in so far as he is restrained by the severest civil service provisions yet suggested in America.

It will be observed that elections are greatly simplified by abolishing all elective officers except the mayor and the councillors. These officers are to be elected at a time other than that at which state or national officers are elected. They must be nominated by petition and elected by secret ballot, on which the names for each office must appear alphabetically, and be voted for individually and not by party lists.

The home rule idea is not pressed so far for the sake of consistency as to permit the city to grant street privileges or franchises *ad libitem*. Such privileges are to be limited by the state in many ways apart from a strict time limit. Likewise the state fixes a definite limit to the power of the city to incur indebtedness. The cities are given unlimited right to enter upon industrial enterprises which it is supposed will bring an income. The debt incurred for such enterprises is to be excluded from the legal debt limit until the receipts from such an enterprise fail to pay expenses. This provision seems to me entirely inadequate and dangerous. A safer way would seem to be to make the debt limit somewhat larger and then include such debts within it in order that the city may not enter upon too many such enterprises at once ; or instead of making the bonds for such enterprises a general obligation of the city, make them a special lien only on the investment for which they are issued. The proposition of the committee ignores the fact that the evil is done, if it be an evil, as soon as the initial investment of a large fixed capital in such an enterprise is unwisely made, and that, although the original investment may have been unwise it might easily be worse to abandon the work than

to keep it up, while to attempt to carry it under the proposed regulation might seriously cripple the ordinary services of the city.

Various other details of the program will doubtless fail to command the support of serious and disinterested students of municipal government. Nevertheless the work marks a great step forward, and will surely prove invaluable to the cause of good municipal government in the United States.

JOHN H. GRAY.

NORTHWESTERN UNIVERSITY.

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*Monopolies and Trusts.* By RICHARD T. ELY, Professor of Political Economy in the University of Wisconsin. New York: The Macmillan Company, 1900. 12mo, pp. xi + 278.

*The Trust Problem.* By JEREMIAH WHIPPLE JENKS, Professor of Political Science, Cornell University. New York: McClure, Phillips & Co., 1900. 8vo, pp. xix + 281.

THE mad rush toward industrial consolidation which has characterized the commercial history of the United States during the past two years has given fresh impetus to the investigation of this phase of nineteenth century industrialism, and a considerable crop of books on the trust question has already made its appearance. Especially noteworthy among these are the recent books of Professors Ely and Jenks; they are the most thoughtful and instructive.

Dr. Ely has long been known as an interested student of modern monopoly, and it is not surprising, therefore, to find him devoting the best and largest portion of his present volume to a consideration of the alleged monopolistic tendencies of trusts. In the course of four chapters devoted to a discussion of the meaning of monopoly, the causes of monopoly, the law of monopoly price, and the limits of monopoly, Dr. Ely repeatedly expresses the opinion that monopoly means something more than business on a large scale, and that mere mass of capital is never a cause of monopoly. "No one," says he (p. 174), "has yet adduced an instance of an important monopoly resting upon mere mass of capital or upon mere combination. In all of the alleged cases of 'capitalistic monopolies,' he insists that the efficient cause of monopoly will be found to be either the union of an ordinary business with a natural monopoly, or some species of favoritism, etc. Ordinary

business—agriculture, manufactures, and commerce—is still competitive in its nature, and is bound to continue so because there is always a limit to the economies to be secured by increasing the volume of business. “A point of maximum efficiency is sooner or later reached” (p. 165), and nothing is gained, least of all monopoly, by expanding the operations of a business beyond this, its natural economic limit. This is Dr. Ely’s chief thesis, and it is well supported by careful analysis and acute reasoning. In harmony with this view is Dr. Ely’s conclusion that there is no separate trust problem as such, because there is no specific cause of trusts. Correct the evils of natural monopoly, special privileges, and wealth concentration, then the trust problem will take care of itself.

Professor Jenks takes a different view of the situation, and he seems to write with a more sensitive appreciation of the business conditions which have given rise to the trusts. Wasteful competition resulting in great loss of industrial energy is, in his opinion, the specific economic cause of combinations of capital. However much the formation of trusts may have been fostered by the speculative designs of promoters, they nevertheless have a solid economic basis, in that they are a superior form of business organization to the ordinary competitive establishment. The problem that the trusts present is, therefore, how to secure the benefits of the cheapened production to the public. Thus far, Professor Jenks contends, this has not generally been the case. With something, and sometimes much, of monopolistic power coming from the sheer mass of the capitalistic strength, the trusts have frequently, and for considerable intervals, been able to keep up prices above a remunerative level and reap the gains of monopoly. He has no hesitation, therefore, in designating them “capitalistic monopolies,” deriving their strength from their superior efficiency of productive, and superior facilities for commercial warfare.

This is, with Professor Jenks, no merely theoretical view, but a conclusion reached after a painstaking investigation of the operations of leading trusts and a careful study of prices. As expert agent of the United States Industrial Commission, Professor Jenks has had unrivaled opportunities for a study of the trusts, and his conclusions and impressions are entitled to great weight. They are interestingly and modestly stated in the present volume, and are re-enforced by a wealth of examples drawn from the evidence heard before the Industrial Commission. Professor Jenks’s little volume is, altogether, the most



instructive contribution that has thus far been made to the discussion of the trust problem. It is singularly free from dogmatism and apriorism, and every page is informed with a strong economic philosophy.

A. C. M.

*Bibliographie des Socialismus und Communismus.* Bearbeitet und herausgegeben von JOSEF STAMMHAMMER. *Band II. Nachträge und Ergänzungen bis Ende des Jahres 1898.* Jena: Gustav Fischer, 1900. 8vo, pp. iv + 403.

IN the preface the author states that this second volume of the *Bibliographie des Socialismus und Communismus* is constructed on the same plan as the first volume, with some trifling changes, only, in the spelling of subject headings.

The volume under review is the third in order of publication, in a series projected by Stammhammer, which is designed to cover the whole field of "socialökonomischer Literatur." The main arrangement is alphabetical by authors or by first-word entry. A closely classed subject index is placed at the end of the book.

Continental bibliographers can, I believe, usually be trusted to omit a good portion of American work, and a considerable portion of English works from their compilations. But the volume before us is an exception to the rule. Of course some omissions are inevitable. A few minutes' comparison with other lists sufficed to bring to light a half dozen or more. Most of these were of minor importance, Gonner's *Socialistic State*, and Sprague's *Socialism from Genesis to Revelation* being the most important. Some of these omissions might have been avoided, had the author had access to the *American Catalogue*. How can he afford to work without this invaluable tool of the bibliographer's trade?

This volume of the *Bibliographie des Socialismus und Communismus*, as well as the previous volume and the *Bibliographie der Socialpolitik*, are especially remarkable for the number of titles of pamphlets and fugitive periodicals which they list. Whether the student is working up the Chicago anarchist trial, the Pullman strike, some phase of Christian socialism in Germany, or what not, he is likely to get valuable suggestions as to pamphlet literature from this compilation. I much doubt if any library in the country could by any other means

put at the disposal of a worker the means for obtaining the titles of half the pamphlets and fugitive periodicals which are here listed.

Stammhammer has taken the bull by the horns, as regards articles in periodicals and encyclopedias. One who wants the literature of socialism will find magazine and encyclopedia articles in their proper place alongside of the books instead of having to search through various periodical indexes and tables of contents and indexes to individual periodicals. The list of periodicals indexed has been increased in this volume. All the articles in Conrad's *Handwörterbuch der Staatswissenschaft* which pertain to any phase of socialism are here listed by authors.

On comparing this volume with the *Bibliographie der Socialpolitik* I do not find as much duplication of matter as there was between the *Bibliographie der Socialpolitik* and the first volume. In the latter case it was almost wholesale, and included subject headings as well as individual titles. In the volume under review I find only repetitions of individual titles, and these not frequent. But why any repetition at all, and where is the harm of a reference now and then from the one publication to a heading in the other? The publication as a whole is deserving of the highest praise; and it may be added that the works thus far issued by Stammhammer place him easily first as a bibliographer in the field of the social sciences. Other volumes in the series will be looked for with interest.

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C. H. HASTINGS.

*Federal Clearing Houses.* By THEODORE GILMAN. The Riverside Press. Cambridge, Mass., 1899. 16mo, pp. x + 289.

THE author of this volume presents a plan designed to avert monetary panics. The vastly important and practical nature of the subject should attract a commensurate interest in the device proposed. The feeling prevails in this country that our currency is not sufficiently elastic, and that the crying need of the hour is some measure that will cure this defect. As the author cites, France and Germany are enabled to stem the tide of financial stringency by means of the note-issuing privilege granted to one or more important banks in those countries. Mr. Gilman proposes for this country a plan which he thinks is in harmony with the genius of our democratic institutions, namely, a system of Federal Clearing Houses, empowered to issue a currency under certain restrictions. To get the matter before the

impressed upon the reader much more forcibly than by the detailed presentation contained in M. Tarde's larger works. At the same time the essential artificiality of the doctrines likewise comes out in plainer relief, proceeding as they do, for the most part, and particularly as regards their general features, on a bold and dexterous use of metaphor and analogy. It seems not improbable that, as a result of the conciseness, not to say boldness, with which the ingenious artifices of the theory are here brought out, the volume may contribute materially to curtail the vogue of M. Tarde's sociological doctrines.

The essential superficiality of the formulations offered is shown, *e. g.*, in such generalizations as this: "Habit is merely a sort of internal heredity, just as heredity is only externalized habit. Heredity, then, is the form of repetition appropriate to life, just as undulation, or periodic movement, is its physical, and imitation its social form" (p. 22). Again: "Every real opposition implies a relation between two forces, tendencies, or directions" (p. 88). Under this elastic, not to say ambiguous term, "opposition," are comprised such diverse phenomena as mechanical action and reaction, arithmetical positive and negative, variations of degree, war, industrial competition, discussion, hesitation. It is plainly by a felicitous use of analogy alone that the comprehensive term "opposition" can be made to serve in the discussion of matters so disparate as these. All this is of a character to suggest the moralizing speculations of the eighteenth century and prepares one to meet the metaphysical conception of a spiritually guided progress, expressed in the conclusion that, "It would appear . . . that the strife of opposition fulfills the rôle of a middle term in the social as it does in the organic and inorganic worlds" (p. 133).

T. V.

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*Report by the Chief Labor Correspondent of the Board of Trade on Trade Unions in 1898 with Comparative Statistics for 1892-1897.* London: 1899. Pp. lxxiv + 311. 1s. 6½d.

THIS is the eleventh annual report made by the Chief Labor correspondent of the Board of Trade on trade unions. It presents but few changes in character of contents from the two immediately preceding it. Like those, it contains statistics relating to (1) the organization, consolidation, dissolution, and membership of all trade unions, registered and unregistered, (2) the finances of one hundred "principal unions," and (3) the organization and membership of trade councils

legislative authorities as well as before the public, the plan was incorporated in bills introduced into the lower house of the fifty-fourth and fifty-fifth Congresses, the date in the latter case being March 17, 1898.

The salient features of this measure are :

1. A system of Federal Clearing Houses, about one to each state, in which all banks of good standing, state and national, are entitled to membership.

2. The authority granted to each clearing house to issue to any member demand notes to the amount of its capital, upon receipt from that member of approved and convertible assets aggregating in value one and one third times the amount of the issue called for.

3. All members are required to accept these notes in settlement of dues.

4. The triple security behind these notes is (a) the individual bank calling for the issue, (b) the State Clearing House holding this bank's membership, (c) the Federation of Clearing Houses.

It is not contemplated that these demand notes are to take the place of any currency now in use, or to supersede any system excepting perhaps that of clearing house certificates successfully resorted to in times of crisis in New York City. This New York method demonstrates the need and virtue of some plan to meet the exigencies of suddenly depleted reserves in time of alarm. There is need of a measure, authorized by law, that will be effective throughout the union in relieving the strain of credit contraction enforced on the banks under the present system. Mr. Gilman's book is a strong presentation of the merits of his plan, and, in view of the great importance of an elastic currency in our monetary operations, it behooves those opposed to this, or who have rival methods to propose, to show the weakness of his cause.

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R. S. PADAN.

*Social Laws: An Outline of Sociology.* By G. TARDE. Translated from the French by HOWARD C. WARREN, with a preface by JAMES MARK BALDWIN. New York : The Macmillan Company, 1899. 12mo, pp. xi+213.

As THE editor of the volume remarks, M. Tarde has here summarized his theoretical work and shown it to constitute a system. In this reduction of the system to its outlines its great ingenuity is

and confederations. The statistics cover a period of years beginning with 1892 and closing with the year for which the report is published. This latest report offers new and valuable material in an analysis of the financial rules of the one hundred "principal unions" above referred to. These unions embrace 63 per cent. of the total membership and are so selected as to represent the several organized trades. The "age of admission," contributions in the form of entrance fees and weekly payments, and the various benefits provided for are shown.

The material made public by the Board of Trade in these reports is very valuable, showing as it does something of the nature and trend of trade unionism in England. The returns secured from the organizations are very complete and the reports are carefully compiled and well arranged. The general reports, published as introductory to the tables, are excellent summaries.

H. A. MILLIS.













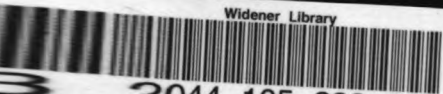
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